



THE CULTIVATOR.

FORBES. VAN VRAENEN. A. P.

To Improve the Soil and the Mind.

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Composition and Management of Barn-yard Manure.

In our last number we submitted to our readers a greatly condensed abstract of a lengthy report by Dr VOELCKER, of certain very elaborate investigations into the composition of barn-yard manure at several stages of its decomposition, which he made some time ago. The original essay or report abounds in analytical tables and minute details, which, as they could be of little interest or utility to the practical agriculturist, we omitted almost entirely in our abstract, confining ourselves mainly to a brief account of those results and inferences which promised to be of service to the *practical* farmer.

We now bring our synopsis of the more practical portion of Dr. VOELCKER'S masterly essay to a close, by a brief statement of the more prominent and practically interesting points which seem to have been developed in the course of his very minute and elaborate investigations, with a few reflections and suggestions of our own. A retrospective glance over the whole ground furnishes the following:—

1. Perfectly fresh farm-yard manure contains but a small proportion of *free* ammonia, and but a small proportion of *soluble* matters, whether organic or mineral. This condition fully explains the slow action of fresh manure when compared with that of such as is well rotted.

2. Well rotted dung contains, likewise, but little *free* ammonia, but a much larger proportion of ammoniacal salts and compounds, and of soluble organic and saline matters, than fresh manure. This explains the greater availability of rotten manure, and the reason why it

produces a more immediate and powerful effect on vegetable growth.

3. The largest proportion of nitrogen in fresh manure, exists in an undeveloped condition, or, as it is sometimes called, as potential ammonia, and is liberated more or less during the process of fermentation, so that it can be assimilated by the growing plants. Thus in the sample analysed, the readily available nitrogen in 100 lbs. of fresh dung, was only .149 of a pound, while about four times as much, or in exact numbers, .494 lb. was found in the insoluble portion of 100 lbs. of the same; while in the manure which had been fermented for six months, the proportion of the former had risen to .297, and that of the insoluble portion had fallen to .309.

4. An examination of the foregoing numbers will show that in *fresh* manure there is upwards of half a pound of nitrogen, or exactly 643 lb., which is equal to .700 of ammonia, in 100 lbs., and a little less, or exactly .606, equal to ammonia .735, in 100 lbs. of that which had been fermented and exposed from November to April. In August the amount of nitrogen was diminished nearly one-third, and in next November, or when the manure was one year old, a little more loss of nitrogen had occurred. The amount of nitrogen will vary much, of course, according to the amount of straw in its composition; the amount of loss from heating or exposure to rains; the amount of nitrogenous matter in the food of the animals; the degree of its wetness or dryness, and several other circumstances. But as the samples examined by Dr V., were of richer composition than the bulk of *ordinary* farm-yard manure heaps, it may be fairly concluded that very little *ordinary* yard manure can contain as much nitrogen as he found, and that even in spring, or before exposure to summer heat and rains, very little will be found to exceed half a pound of nitrogen in 100 pounds of manure, equal to five pounds in 1,000 pounds, or ten pounds in a ton. As nitrogen is the most expensive and most valuable ingredient in the stable and yard manure, and indeed in all kinds, it is of importance in buying and selling manure, and for other purposes, to have some such guide as is presented above, for estimating the amount of this ingredient in a ton or other given quantity. But even with such help there is room for the exercise of much judgment.

As ammonia costs, in the form of Peruvian guano, about 16 cents per pound, and as 10 pounds of nitrogen is equal to a little over 12 pounds of ammonia, it would be not far from exact reality, to call each pound of nitrogen worth about 20 cents. The very best yard ma-

nure cannot, therefore, be *fairly* estimated as worth any more than \$2 per ton, so far as the nitrogen is concerned, and much of it, from containing less of this most valuable constituent, could not be rated nearly so high. The other ingredients in a ton, including phosphates, carbonaceous matter, potash, &c., might be supplied in other forms at about 20 cents. Very little yard manure can be fairly estimated, therefore, as worth more than \$2 per ton, while much of it, from repeated washings by rain, would be estimated beyond the market value of the chief ingredients in other forms, if rated at even \$1 per ton.

5. The drainings of dung heaps contain considerable quantities of phosphate of lime, much more than the urine of horse, cow, or hog, and for this reason are more valuable, and ought to be prevented from running to waste.

6. The most effectual means, according to Dr. V., of preventing loss in fertilizing matters, is to carry the manure directly to the field, whenever it can be done.

7. On all soils with a moderate proportion of clay, no fear need be entertained of valuable fertilizing substances being wasted, even if not plowed under soon. Fresh, and even well rotted manure, as we have seen, contain very little *free* ammonia; and since active fermentation, and of course the further evolution of free ammonia is stopped, by spreading out the manure on the field, valuable volatile manuring matters cannot escape into the air by adopting this plan. Then, again, as soils with a moderate proportion of clay possess in a remarkable degree the power of absorbing and retaining manuring matters, none of the saline and soluble organic constituents are wasted, even by a heavy fall of rain.

In virtue of these considerations, Dr. V. says he is much inclined to recommend as a *general* rule, to cart the manure on the field, to spread it at once, and to wait a favorable opportunity to plow it in. In the case of clay soils he has no hesitation in saying that the manure may be spread even six months before it is plowed in, without losing any appreciable quantity of fertilizing matters.

8. During the fermentation of dung there is a considerable proportion of the organic matters dissipated into the air, in the form of carbonic acid and other gases; but, *when properly regulated*, the fermentation is not attended with any loss of nitrogen, nor of saline mineral matters.

9. In the interior and heated portions of manure heaps, ammonia is given off; but on passing into the external and cold layers, the free ammonia is absorbed and retained.

10. During the fermentation of dung, ulmic, humic and other organic acids are formed, which fix the ammonia generated in the decomposition of the nitrogenized constituents.

11. Ammonia is not given off from the surface of well compressed dung heaps, but on turning or stirring them it is given off in appreciable quantities. Dung heaps, for this reason, should not be turned or stirred more frequently than is absolutely necessary.

12. Farm-yard manure becomes deteriorated in value when kept in heaps exposed to the weather; the more, the longer it is kept.

13. The loss in fertilizing matters, which is incurred in keeping manure heaps exposed to the weather, is not so much due to the volitilization of ammonia, as to

the solution and removal of ammoniacal salts, soluble nitrogenized organic matters, and valuable mineral matters, by rains.

14. If rain is excluded from dung heaps, or if little rain falls at any one time, the loss is trifling; but if much rain falls, and especially if in heavy showers, in a short space of time, a serious loss in ammonia, ammoniacal salts, soluble organic matters, phosphate of lime, and salts of potash, is incurred, and the manure becomes rapidly deteriorated in value, and diminished in quantity.

15. Well rotted manure is more readily affected by the deteriorating influence of rains than fresh manure.

By the investigations which have been under our consideration, chemical science has certainly rendered an important service to the practical agriculturist, and Dr. VOELCKER has certainly placed the farming community under many obligations to him.

Indian Corn—Top-Dressing of Ashes Plaster, etc.

In looking over the mode of cultivation practiced by those most successful in growing the corn crop, and especially the statements of those who have taken premiums for large products of this cereal, we almost invariably find that some fertilizer was applied in the hill before planting, or as a top-dressing after the corn appeared above ground, immediately before or after the first hoeing. The benefits of this course are not unappreciated by thousands who do not compete at fairs, and hence we find the latter practice quite general throughout the Middle and Eastern States. It involves but little labor and a slight expense, and is found to assist the young corn in getting an earlier and stronger start, so that it can forage for itself through a greater depth and breadth of soil.

A handful of ashes thrown around the hill just before hoeing the first time, is one of the most simple and common applications. That it is beneficial, long experience shows, and how any farmer can neglect it for the purpose of selling ashes for eight or ten cents a bushel in cheap calicoes and inferior groceries, is more than we can comprehend. In applying the ashes, if damp, a small paddle or scoop will be found convenient, or a piece of old tin or sheet-iron rolled up funnel-shaped, can be employed, the smaller end serving as a handle. A little practice will enable one to do the work very rapidly, and yet carefully, so as to place the ashes around and not upon the corn, which is injurious, especially if no rain follow immediately.

We have mixed ashes and plaster, one-third of the latter, and thought the application a more effective one—better than either applied alone. It should be remembered, however, that neither ashes or plaster can take the place of manure. The soil must be rich for corn, and there is nothing better to make it so than good barn-yard manure; but these top-dressings are useful, as before remarked, in stimulating the early growth, and thus increasing the strength and hastening the maturity of the plant.

There are various mixtures employed by different farmers, varying in cost and value. Mr. Walrath of St. Lawrence Co., on his State premium farm, uses a composition of six bushels of ashes, one of plaster, one of lime, and half a bushel of salt, with a small quantity of sulphur, pounded bones, &c., mixing all together, and applying a small handful both before and after hoeing.

The effects are beneficial to this and all other farm crops. Salt alone has been commended as a valuable top-dressing, but it is difficult so to apply it as not to kill the corn—which it will do if it comes in contact with seed or young shoots.

On some soils neither ashes or plaster are thought to produce any beneficial effect. We think these exceptional cases are scarce away from the seaboard, and the vegetable alluvions and prairie soils of the West. We shall gladly give place to experiments throwing further light on the whole question of top dressings for corn and other hood crops.

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Cotton-Seed Oil and Oil-Cake.

Within the last quarter of a century how many additions have been made to the resources of agriculturists!—Almost every year, some new invention or some fortunate discovery has afforded fresh gratification to the hopeful, the enterprising, the progress-loving among the fraternity of those whose business and whose pleasure consists in the cultivation of the soil and its products! Within that period, or since the establishment of journals expressly devoted to the improvements and interests of agriculture, how much has been done in the way of improving the various breeds of stock, in the invention of multitudes of improved implements and labor-saving machines, in the discovery and manufacture of various new fertilizers, and in rural economy and farm management generally!

Among these recent improvements and additions to our agricultural resources, that of the manufacture of oil and oil-cake from the seeds of the cotton-plant, promises to prove one of the most valuable. It furnishes a new source of income and profit to the cotton-planter, while at the same time it makes an addition to the materials of which those who raise or fatten stock may avail themselves with advantage. When corn is scarce or high-priced, this substitute for the feeding and fattening of cattle, may be more highly appreciated than it has ever hitherto been.

But a few years ago cotton-seed was almost entirely valueless, being seldom employed for any valuable purpose beyond the little that was used for planting the annual crop. In some cases it was fed to cows and cattle, but more generally it was allowed to go to waste, or was added to the manure heap. Now the demand for it is quite considerable, both the oil and the oil-cake derived from it having been found of much value. In the Patent Office Report for 1856, the Consul of the United States at Alexandria, Egypt, reports in reference to the cotton crop of that country, that "a demand has recently sprung up in England for the cotton-seed, for the manufacture of oil and oil-cake, and all that can be spared is readily disposed of at the rate of 30 cents a bushel."

The demand for, and use of cotton-seed and oil-cake was much restricted for several years, in consequence of doubts about the safety of using either for feeding, on account of the husks and short fibres of cotton which adhered to the seeds being thought to be indigestible, or positively deleterious, by causing obstructions in the animals fed on it.

This objection to the feeding of cotton seed and oil-cake, has been recently obviated by the invention of several machines for the decortication of the seeds. As this separation of the husks and adhering fibres, will

doubtless lead to an increase in the use of the seeds and the cake, there must be not a few to whom any reliable information in regard to the qualities and merits of this new feeding material may be both acceptable and useful. For this reason, and with this hope, we submit the following facts and statements:

1. Cattle eat the seeds, even with the husks unremoved, with great avidity. Decorticated seeds will most probably be eaten with still greater relish.

2. Experiments made two years ago, and reported to the Royal Ag. Society of England, show that common (undecorticated) cotton-seed cake is worth about £8 10s. per ton, when linseed cake is sold at or about £14 10s., or in other words, that they bear about that proportion for feeding purposes.

3. The new or decorticated cotton cakes have recently been analysed by Prof. VOELCKER, the chemist of the Royal Ag. Society, and have been pronounced by him superior in nutritive properties to any sample of cotton cake which he had previously examined. The two samples of this new kind of cake analysed by Dr. VOELCKER, were found "extremely rich in flesh forming principles, as well as in oil and fatty matters. Indeed both specimens of cotton cake contained a great deal more of these valuable constituents than the best linseed cake, and ought to be according to the analysis, more valuable as a feeding stuff than linseed cake." Dr. V. suggests, however, that the analytical results obtained in the examination of feeding stuffs, like oil-cake, are insufficient of themselves to determine their relative practical feeding value. Various circumstances may affect the value in practice which could not be determined by analysis. For example, the oil in cotton cake may not be so easily assimilated as the fatty matters in linseed cake, or it may not agree with the constitution of animals, or it may contain something not detected by analysis, which may affect its practical utility. Nothing short indeed of actual feeding experiments, as Dr. V. suggests, "will suffice to ascertain in a satisfactory manner, the comparative value of this cotton cake and linseed cake." He is inclined to believe however, that the decorticated cake will prove much superior to that formerly in use, (viz., that made from seeds with the husks unremoved,) and also an economical substitute for the much more expensive linseed cake.

The following is the composition of the two samples of decorticated cotton seed cake, analysed by Dr. VOELCKER:

	No. 1.	No. 2.
Moisture,	8.27	7.67
Oil and fatty matters,	19.19	14.93
Mucilage, gum and sugar,	12.25	14.47
Protein compounds,* (flesh-forming principles,)	46.62	43.21
Pure cellular fibre, (woody fibre,)	10.22	11.45
Inorganic matters, (ash,)	7.45	8.27
	100.00	100.00

From this analysis it will be readily seen, by those who have given any attention to the chemical composition of the various fodders or feeding substances commonly used, that this new kind of cotton cake (decorticated) is richer in protein compounds containing nitrogen than linseed cake, the amount of nitrogen in the latter being set down usually at from 5.20 to 6.00 per centum. The value, therefore, of this new kind of oil-cake ought to be as great, if not a little greater than that of linseed, for the purpose of feeding and fattening.

* Containing nitrogen: No 1, 6.82; No. 2, 6.91.

ing cattle. The manure of animals fed upon it, will also be equally or more rich in that element for which we have to pay at the rate of 16 cents per lb., and sometimes a great deal more in all marketable manures.

Depth of Plowing.

A good deal of discussion has been had upon the proper depth of plowing for different soils and crops, but the question seems as far from being settled as ever. Those who advocate uniform deep plowing may not be far from right, if the soil is first fitted as it should be for the operation. As long as the soil turned up is suitable for growing good crops, we may send the plow "down to the beam" with advantage, but a cold, lifeless soil, containing elements injurious rather than beneficial to growing vegetation, cannot profitably be brought to the surface for that purpose.

There can be little question however, that a deep fertile soil will produce much the largest and best crops. There must be room for the roots to go down beyond the reach of drouth, and to find appropriate food for their use, and this is most largely present in a deep, mellow soil. If a soil is shallow, it is also usually wet, and the presence of water is almost invariably the cause of its shallowness. Let it be underdrained in a thorough manner, and it soon loses this wet, shallow character, and may then be plowed, deepened and manured, until it becomes deep and fertile, and fitted for growing profitable crops.

Sandy soils do not often acquire a very fertile character, because they are too light and porous to hold manure. Not needing to be made more loose and friable, they do not need deep plowing, but rather a course of treatment which will tend to consolidate both soil and subsoil. Our present remarks refer more particularly to loams and clayey soils.

If, then, we underdrain our wet soils, we may soon give them the deep plowing requisite to large productiveness. If we relieve them of all stagnant water, the cold, lifeless undersoil, will soon become a warm, quick soil, fitted to receive and retain manures—fitted, in short, for thorough and profitable culture in different farm crops. The only questions then, in regard to the depth of plowing, will be—what depth of soil does the crop we intend growing require, and how deep shall we turn under green-sward or barn manures to get from their decomposition the best growth of crops?

These questions we may again take up—whether we do or no, they are open for discussion by our readers, and we shall gladly give space to all well considered articles on the subject.

Culture of Buckwheat.

This is an important crop, and we present a few hints in regard to its cultivation and uses, for the consideration of our readers. The time of sowing varies with the season and place, but from the 20th of June to the 4th of July is regarded as the best and most proper season; but we have known good crops from that sown on the 12th July. If sown too early it is liable to blast, and if too late, is apt to be hurt by frost. The land best adapted to this crop is a light loam, and it is also a good crop to subdue and ameliorate newly cleared or recently drained land. The general practice among farmers has been, to sow buckwheat on their poorest

land, when there is no crop in fact, which will better pay for liberal and generous manuring. The quantity of seed per acre should receive due attention. It is a crop that spreads very much, and therefore less seed is just as good as more. From repeated trials, we have found that half a bushel is amply sufficient for an acre of ground—and this, if sown evenly over that surface, will give as many stalks as can comfortably grow; for if a larger quantity were sown, the growth of straw would be so abundant that it would lodge down, and thus would not fill so heavily, or ripen so evenly. After being cut it should lay for a number of days upon the ground, and if out in two or three showers no damage is done, if it be turned over so as to dry off. When hauled into the barn it should be threshed immediately, as at that time it shells out more readily, and it can as well be done then, and it is out of the way. The average yield is from twenty to twenty-five bushels per acre, although some accounts of the yield of this crop seem almost fabulous—one of which occurs to us at writing—that of Mr. SAMUEL ALLEN of Benton, Yates Co., who in 1855 raised one hundred and twenty-seven bushels from one bushel sowing, on about two and a half acres.

The seed is valuable for food to both man and beast, and the straw, if cut before being killed by frost, is a most excellent fodder for sheep, they being particularly fond of it. It seems that this crop should receive more attention from our farmers, as its merits certainly demand.

Southern Wheat at the North.

NEAR GENEVA, 27th May, 1859.
MESSRS. EDITORS—I believe I wrote to you some time ago, that the Hon. H. L. BROWN of Fayette, Missouri, was kind enough to send me a bushel of wheat—I believe it is called the Early May Wheat. I had intended to watch and note the day of the month it came, or rather began to come in ear, but was surprised yesterday to find it nearly in full ear. Unless the midge makes its appearance earlier than usual, this wheat must escape its ravages. The Mediterranean Wheat is beginning to show a few ears, and will probably be in full ear in all next week; but much of that wheat will have too much straw unless the weather keep dry. We had a good shower yesterday, and a little to-day, but we need a great deal more rain for the barley and oats. Corn is coming up, but some have not got their corn ground plowed, owing to the drouth; they will get a chance now, but we have not had rain enough to make heavy land plow as it ought to. Clover must be a light crop. This rain will help it a little, but it is beginning to blossom, and it never grows much after that. JOHN JOHNSTON.

Cheap Salt for Manure.

SYRACUSE, May 28, 1859.
L. TUCKER, Esq.—I wish to give information through the medium of the COUNTRY GENTLEMAN, to farmers and others disposed to make use of salt, by way of experiment, as a fertilizer, that salt of an inferior quality, (as valuable as any other, however, for agricultural purposes,) can now be obtained at the works in Syracuse, in any quantity equal to the probable demand, and at a very low figure. It can be had for, say, 75 cents per barrel of five bushels, or for not to exceed 11 cents per bushel, shipped loose in boats. When wanted in any considerable amount, say twenty-five barrels, or upwards, for agricultural or experimental objects, it will afford me great pleasure to attend to any orders for the same, gratuitously, so far as my personal services are concerned. I am one of those who believe in the value of salt as a top-dressing for grain and other crops, and feel as though I should be rendering a public service by facilitating any trials of its efficacy in that respect, within my power. Very truly, yours, &c., V. W. SMITH, Supt. Onon. Salt Springs.

Road-Making and Repairing.

June is probably the most favorable month for "working out" the road tax, (we speak of "York State,") and is the one most generally chosen by our country "pathmasters." That our system of doing the work is an imperfect one—expensive and incapable—is very generally admitted; yet it is established and unlikely to be changed, so we will present a few hints on the method of expending to the greatest public benefit, present and prospective, the labor assessed to our "tax-paying" readers.

In laying out roads in this country, we have been confined too closely to section lines, regardless of the inequalities of the surface. "The longest way around is the shortest way home," when we pass over instead of going around hills or deep valleys. No unnecessary curves should be allowed, but a good road may wind along to keep the level, very often without increasing its length. Experiment shows that the load which a given force will draw on a level, will require nearly *four* times that power to draw it up a rise of one foot in a hundred. Hence it has been established as a rule in road-making, that the length of a road may be increased twenty times the perpendicular height to be avoided, with true economy in the result.

Most of our roads are already established, but we often see changes of route to straighten some curve of those laid out before the country became much settled; and almost invariably these changes are in defiance of the above principles, and are no real improvement save in bringing our farms into better form for the plow. It would oftener place like qualities of soil in the same field, to curve around the base of a hill, and we may descend into the valley only to find a slough at the bottom, and another hill to climb on the other side. The *pleasant* road

"Doth follow

The river's course, the valley's playful windings,
Curves around the corn-field and the hill of vines."

But to road-making and repairing, as we proposed in taking up the pen.

The great difference between our good roads and our bad ones, lies in the fact of their perfect or imperfect drainage. It is impossible for a good road to exist where water stands and stagnates, and where the rain that falls can pass off by evaporation only. It must have ditches at each side, and these must be to lead away and not to *hold* the water, or the road-bed will soak up more or less moisture by capillary attraction, and thus remain rutted and muddy. Even on side-hills, if water remains on the upper side, it will injure the road by passing under. We must provide, as far as possible, for the thorough drainage of the road-bed either by surface or covered ditches. An underdrain directly beneath the track, would probably furnish the most economical foundation for an always dry and hence always good road.

In making or repairing a turnpike, gravel and sandy loam are the best, and the surface soil—often mere muck—the worst material that can be employed. Better leave a road untouched, than to scrape from each side a narrow track of sods, which will always become rutted and muddy in long rains, and almost impassable in the spring and fall, and when unfrozen in winter. A few inches of gravel, and an open ditch along each side to carry off the water, would be of far greater benefit, and often less expensive.

On a naturally dry soil frequently no turnpike is needed. Let the loose stones be removed, the hollows filled up, and a few drains be provided, and the road will remain in a better state than if thrown up in the usual manner. Often the great necessity of the road is a simple ditch to keep off the water from the hill above, yet not unfrequently ten times the labor is expended in turnpiking, while this want remains imperfectly supplied.

In filling ruts, large stones should never be employed, for however deeply placed they are very certain to work up to the surface. Let them be broken finely, and they will become fixed facts, and the holes which they fill will become permanently mended. No loose or projecting stone should be allowed to remain in the roadway at any season. The damage they occasion to teams and vehicles is often equal to the whole "wear and tear" beside.

The leveling scraper is now in general use in many road districts. They should be put in requisition still more frequently—as often, at least, as the roads become rutted and uneven—and in many places, little more will be found necessary. On the whole, we are of the opinion that it will be found more profitable to employ the greater share of the labor assessed, in permanent improvements like draining and graveling a portion of the road thoroughly each year, than in doing "here a little and there a little," to but small purpose or benefit throughout the district.

Corn—Culture and Hoeing.

Clean culture and frequent stirring of the soil in the early stages of its growth, are indispensable requisites to large crops of Indian corn. Of soils and their preparation, of the seed and its planting, of top-dressing, and other cognate topics, we have already had "our say." The hoe—hand and horse—must do what remains to be done until harvesting, when we hope to offer some further remarks on this favorite topic. At present, we would recall some thoughts on hoeing corn.

First, a word about hoes. Probably the Indians knew something about the culture of *Indian* corn. They used a rudely constructed hoe, and practiced clean and frequent culture. Historians say they also killed their corn—and made the hills as high as they could pile them. Yankee corn-growers find this useless work; but they cannot by any course of theory or experiment, show it to be an unsafe rule to "allow no weeds to grow among the corn." We were only intending however, to speak of what hoes had been, and what they should be. Within our recollection, they have been comparatively rude, heavy implements, which it were almost a day's work to carry, to say nothing of using. Now, we have little right to complain on that score. Good hoes can be had, with a light well-tempered blade, and a long springy handle, which will enable the possessor of a moderate backbone, to "hoe his row" with the best of the gang.

The use of the horse-hoe, or cultivator, is a pre-requisite to that of the hand implement, and a good one is indeed a great labor-saving invention. With straight rows and a mellow soil, the culture can be very nearly accomplished—the hills only need a brush or two with the hoe to finish the work. With a steady and "knowing" horse, who will "haw" or "gee" at the word, or is quick to slight pulls on the rein, and who can *see* corn hills for himself, one can stir the whole surface be-

tween the rows, by passing back and forth each way, with proper care. A good horse-hoe will be so arranged as to turn the soil from the hills when first used, so as not to cover the young corn, and to turn it towards them when it becomes large, so as to cover up any small weeds among the stalks.

We have recently seen some statements of the advantage of performing the whole culture of Indian corn with the hoe. It may do on very mellow soils, but will be thought too slow by the majority of farmers. Besides corn soils are not generally sufficiently mellow without the use of the horse implement. Their use while the corn is small, cannot much affect the roots of the same, and when the corn becomes sufficiently large to shade the ground, the weeds may be kept down with small labor properly applied. We should sooner attempt to rely upon horse-hoeing entirely, than to depend upon hand-hoeing outside our garden patch.

The culture of corn should begin as soon as possible. Weeds with a single root, as all have when they first appear above ground, are readily destroyed; but when they become large, we must not only cut them up, but bury them beneath or dry them upon the surface of the soil. In moist weather we have found their destruction impossible, because delayed a week, when if taken earlier, the work would have been a very slight and certain one.

There is a philosophy in using the hoe, as well as in many other common employments or operations. We must take up the implement "with an object in view," and that object we have stated to be, to *mellow the soil and kill the weeds*. Many scrape away a little of the surface soil around the plants, and haul up a little mellow earth to hide the weeds, not to *kill* them, as we should do. Let us strike the hoe well in, each side of the hill, and draw it to us so as to mellow the soil two inches deep. Do this two or two three times, each side of the hill, and then smooth it off to suit the fancy, and both these objects (mellowing the soil and killing the weeds,) will be accomplished. The horse-hoe ought to have done the rest.

"How many times shall we hoe?" may be asked. As often, we answer, as is requisite to accomplish the objects above stated. *Clean culture* should be the rule—and it should be kept, even if "more help" had to be employed, as in haying and harvest. Hoeing thoroughly finishes what manuring, and full preparation begins, and fills out the promise of a crop.

Hints on Building in the Country.

To a person about constructing country dwellings with their necessary adjuncts, a wide range of style is offered for the selection of an appropriate design, appropriate to the scenery of the estate, to the habits and occupations of the man, and to the section of country in which it is to be built.

Old prejudices have been surmounted—the *Sugar Box* and *Grecian Temple* styles have long since fallen into bad repute, and now we have modifications of the Gothic, Italian, Swiss, and Grecian, well adapted to the country and climate.

In this particular alone—Style—great improvement has been made in our country within a few years, and this improvement is still going on with increased vigor every season. Passing through our suburban villages, beautiful villas and cottages now greet our eye at every turn. Like an epidemic, one catches the building fever from his neighbor, and the prevailing desire at present seems to be, to have the prettiest and most to be admired home.



But one great difficulty which deters many from building, is embodied in the almost stereotyped phrase: "No person can build a house for the cost as estimated by the architect or carpenter before commencement." Very unfortunately this is true to a great extent; but what is the reason? Easily enough explained in one word—alteration. Mr. Smith wants a house built—an estimate is made by the carpenter, the house is begun and progresses finely, when all of a sudden Mr. Smith says, "Stop, I want this door altered into a window, this room made larger, and instead of having a portico over the front door, I think I'll have a piazza all around the house,"—and so he alters a little here and a little there. The carpenter is very willing of course, and very faithfully notes every *extra* on his bill; but does Mr. Smith very faithfully note every *extra* on *his* memorandum? I am afraid not, and when the bill is presented, amounting to two or three thousand dollars more than the estimate, Mr. Smith raves and says, "I knew it would be just so; this house-building is an infernal shave—catch me in it again if you can," blames the carpenter for not "sticking to his price," and perhaps charges the poor fellow with being dishonest, when all the while the fault lies at his own door.

Now to remedy this evil is the very object I am aiming at. This is why I am advising you to sit down this winter with your architect, and freely and fully discuss every item of design and plan. Get everything perfected and entirely satisfactory, and when Spring comes go straightway to your carpenter with the drawings, and ask him for what price he will build you a house after those designs. Once having got his estimate, say not a word to him until your dwelling is completed, and you are ready to take possession. Then you will have reason to thank him for the success and me for the suggestion of the idea.

With these remarks we present a design for a cottage villa of the rural gothic style, as, in our judgment, this style offers more variety, better harmonises with the generality of American scenery, and is destined to be the favorite with us, having in it the rudiments and foundation of a new *American style*.*

The plan comprises: Parlor, 15 by 18; hall, 9 by 20; dining-room, 15 by 18; bedroom, 12 by 14; kitchen, 14 by 16; store-room, 7 by 9; scullery of the same size, and several closets on the first floor.

The second floor contains four chambers, with closets and dressing-rooms.

The cottage is designed to be built of stone, with the ornamental details of wood painted a brown freestone color. The roof projects 3 feet, and the gables are ornamented with verge-boards cut from 3-inch plank.

The chimney tops are of Terra Cotta.

Cost in New-England about \$3,500, if finished throughout in a plain, simple, but thorough manner. G. E. HARNEY. Lynn, Mass.

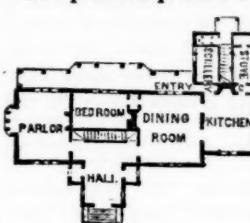


Fig. 2.

Advantages of Under-Drainage—II.

In a former number something was said on the above named topic, but it was not exhausted, and the importance of the subject may justify farther remarks. I add then that *drainage prevents coldness in soils*.

Not, of course, that drained soils never become cold, but they often remain cold by reason of an excess of moisture. I will illustrate this. You place over the fire a vessel of water, and apply the requisite degree of heat, and presently it will boil. But any degree of heat you may apply will not increase its heat above boiling point, because the excess of heat is carried off by the vapor which escapes. You now understand that vapor takes with it a certain amount of heat whenever it rises from water. If therefore, your land be wet, the evaporation of the water which it contains will carry off the heat, which would otherwise impart its quickening influence to the young crops.

But are you alarmed lest your land suffer from drought in case it be drained? Entertain no fears from this source, for I propose to show you that "*thorough drainage will enable wet land to withstand drought far better than it could without drainage*."

"Well, this is a singular proposition," you say. "First, drainage will dry our lands, then it will keep them moist when they need moisture most. A curious curious doctrine this."

It is a little curious I admit, but nevertheless it is true. And I desire to explain how it is.

You understand how drainage deepens the soil. This was explained to you in the former number, also how hard, clayey soils slack and become fine when the water is removed from them.

Now you have drained your land, and the hard subsoil has crumbled into small particles, so as to admit the air freely to circulate among them. This air contains a certain amount of vapor, and with this vapor it parts as it comes in contact with other bodies. In certain cases you see that this is the case. For instance, stones lying on the surface of the earth, "sweat," as the boys say, and this too in very hot, dry weather, and under the direct influence of solar heat. Now this "sweat," as it is called, is only the condensed vapor of the atmosphere coming in contact with a substance colder than itself. The same thing is illustrated in another way. During a hot day of summer you fill a tumbler with ice water, and after standing it in your room for a short time, you notice that the outer surface of the tumbler is covered with drops of water. The tumbler "sweats." How is this? The water from within did not penetrate the glass, and filter through, for glass is impervious to water; but the tumbler being colder than the surrounding atmosphere, condensed the vapor which it contained, and which came in contact therewith, and the same result followed as in case of the cold stone. Now open the pores of your soil to the air, and that air carries with it moisture, even in the drought of summer.

Besides, porous light soils drink in more dew than hard, impervious ones. Hence your drained lands are more benefited by the moisture thrown back on the earth during the night, than are lands not thus improved.

Drainage is conducive to health. This may not be the case in all localities, but in some it is manifestly so.

In regard to the diseases prevalent among the laboring classes in certain districts of England, we have medical testimony to the following effect. Districts where fever and ague had for years been prevalent, were almost entirely free from it after drainage was adopted. At the same time we were assured "that the fatality of disease, or the comparative number of deaths from severe ailments, was diminished about one-half."

It ought to be remarked also that the diminution of diseases in the vegetable kingdom has been observed to attend draining. I shall not dwell on this branch of the subject farther than to suggest that such might be expected to be the case, from the known changes which it produces on the atmosphere is equal, to some extent, to a change of climate.

The advantages of under drainage then are neither few nor small, inasmuch as it removes from the soil stagnant and superfluous water, deepens its fertilization, renders it more friable, prepares it to respond more readily to the use of manures, opens the soil for the circulation of air around the roots of plants, prevents the freezing out of both grass and grain roots, lengthens the seasons, produces favorable changes on climate, guards against drought and prevents or modifies certain classes of diseases both among men and vegetables. Have we not then an accumulation of advantages which will justify very decided action? ■

Specific for Bugs on Vines.

Having seen by your paper that many truckers in your section are anxious to ascertain a simple and sure remedy to destroy bugs on squashes, cucumbers, and the like, I will give you one which is almost a specific, and within the reach of every one, especially those living on the seaboard.

Procure fresh fish—of any kind whatever, the commonest and cheapest just as good—a sufficient quantity according to circumstances, say one peck to a barrel of water. Let them stand therein a day or two, in order to commence decomposition and emit their *necessarily unpleasant* odor; then remove the barrel to your patch, and with a watering pot go over your whole patch, just dampening the leaves.

In addition to driving away the bugs, your plants will become green and healthy, and soon grow beyond the reach of any future swarm of degradators. It may be necessary to use the water two or three times in the course of two weeks, but remember that every application is equivalent to a dressing of manure, which will amply repay for the labor, which is very trifling. Fresh fish offal is of equal value with the fish. V. B. B.

Out-Door Whitewash.

A house-painter on Long-Island, says the *Am. Agriculturist*, gives the following recipe for making out-door whitewash: Take unslaked lime and put it in a bucket, with about as much water as will be required in use. Then throw in about half a pound of tallow or lard for a peck of lime. As the lime stakes, the heat will melt the tallow, when it is to be thoroughly stirred in—the stirring to be repeated frequently during use, if any grease rises to the surface. This washes off less readily than any other kind he has tried, and is at once cheap and readily available.

Gas Tar.

The value of gas tar judiciously applied for the prevention of insect attacks on fruits and vegetables has been admitted for years. Like many other valuable applications, many persons used it without skill, and being of a very caustic nature, injured their trees. Experience has shown a safe method of applying it, which is recommended by many skillful cultivators who have tried it. The plan is to smear rags with the tar, and hang them in the branches of trees likely to be infested with the curculio. We are assured that this has checked their depredations on the plum crop to a sensible extent this season. Gas tar is also successfully employed on other vegetables to chase off insects, as its odor is very offensive to them. A correspondent has kindly offered to furnish his method of applying it to squashes, cucumbers, &c.

Soft-shelled Eggs.

Your correspondent wishes a remedy for the soft-shell egg producing propensity of the turkey he has. I had a very fine hen that was similarly constituted. I regarded it as owing to disease, and not to the lack of any particular food required to remove the cause. I fed her one tablespoonful of linseed oil three times a day, feeding very sparingly for about a week, after which she laid eggs perfectly healthy. I might philosophise upon the action, but deem it unnecessary. R. W.

French's Treatise on Farm Drainage.

We have already given a brief notice of this very useful book, but a more extended notice is perhaps due to the work and to our readers. No treatise of the kind, published in this country, contains nearly so much valuable information on the subject of drainage, and especially such as farmers wish to apply directly in practice. The principal heads under which this information is given, are historical notices—rain and evaporation—drainage of high lands—modes of operating, including drainage with tile—depth—modes of laying out drains—distance asunder—outlets, wells and traps—position, size and junction—tile machines—cost—implements—effects—drainage of cellars—draining swamps—legislation as affecting drainage, and drainage legislation—draining stiff clays—obstructions, &c. Under these different heads we are furnished with a great amount of interesting and valuable facts.

The chief defect of the work, and the few errors which it contains, result from the same cause that renders too many good American books defective, namely, hasty preparation. Few men can supply a complete practical treatise on any subject who have not spent at least a large portion of a life-time in testing all its statements. Yet it appears that the author, at the time of writing, had only three years experience in the use of tiles for drainage, although they are regarded generally as the foundation of all successful results. He seems to have fallen into some singular mistakes in relation to their first introduction, remarking on p. 47, "We cannot learn that *cylindrical pipes* have ever been manufactured in this country till the summer of 1858, when the engineers of the New-York Central Park procured them to be made," &c. The same remark is repeated elsewhere. We have known several manufacturers who have for the last ten years confined their operation almost exclusively to the pipe-tile; in our own experiments, extending back many years, we have never laid any other; and some of the experiments which he quotes as having proved so successful in New-York, were actually performed nearly ten years ago with pipe-tile. Such a mistake as this is hardly excusable in one who takes the position of a general teacher on the subject. In relation to the pressure of water in soils against the tile, he quotes from a British writer who says: "The pressure due to a head of water of four or five feet, may be imagined from the force with which water will come through the crevices of a hatch, with that depth of water above it. Now, there is the same pressure of water to enter the vacuum in the pipe drain, as there is against the hatches, supposing the land to be full to the surface." Although the author seems to express some doubts of this statement in a general way, he makes no allusion to the counteracting force of capillary attraction which must constantly vary with the fineness of the particles of the soil, as well as with the quantity of water held by it. If, for example, there were nothing but loose stones above the tile, the pressure of water in their crevices would be precisely the same as an equal head of clear water. As the crevices become smaller, the pressure would constantly diminish until the soil would assume the character of a sponge, and hold a large portion of water without any pressure whatever. The quantity of water contained in the soil would also constantly affect the result. When at first deluged with heavy rains, the pressure would be formidable; but this

pressure would constantly diminish with the quantity, until the weight of the water would be equal to the capillary force, when it would cease to run.

In another place, the author gives the natural slope of banks of earth as varying from 21° to 55° with the horizon, and adds that the natural slope of "common earth" is $33^{\circ} 42'$,—a degree of precision wholly chimerical, with so wide a generic appellation, the variation in "common earth" being at least some degrees, instead of being brought down to the sixtieth part of a degree. A want of precision, again, occurs in giving the proper size of tile on p. 159, where we are told that *two-inch pipe*, with 50 feet distance asunder, for loose soils, and less for compact soils, is enough. The length of the drain, as controlling the size of the pipe, a most important consideration, is entirely omitted. If, for example, a two-inch pipe will carry off while running full the surplus water of an acre in 48 hours, then such a drain for each 50 feet, and 53 rods long, would become full in a wet time. If longer, the pipe must therefore be larger, or else pass into a larger main pipe. With regard to the *depth* of ditches, he shows clearly that in many soils it will cost at least twice as much to cut ditches four feet deep as to a depth of three feet. Yet he advocates the former depth in all practical cases. Three feet drainage will usually cost \$25 to \$30 per acre; four feet drainage would therefore become nearly impracticable, if \$50 or \$60 per acre were required. There is no doubt that a four foot drain is generally much better than one extending downward only three feet. But in many instances the latter will answer every desired purpose; and if in a strong adhesive soil, be safer than a four-foot drain in a porous soil. The objection to a shallow drain is the liability of the surface water to pass turbid into the pipe, and when this is the case, it must deposit more or less sediment, and after a lapse of years become choked. A well constructed drain in a strong subsoil, three feet depth, can scarcely ever receive any water that has not been rendered clear by filtering downwards. In porous gravel or sand, the result may often be different. Our author does not even allude to the mode, published in detail in this paper last year, of reducing the expense of cutting ditches more than one-half by a ditching-plow, although he must have seen the article as he copies two of its cuts. In speaking of brush drains, he states that the "but-end should be laid *up-stream*," a singular mistake, as this would tend to obstruct the current, by throwing the water backwards as it descends down through the branches.

He quotes largely from many English works, and from Prof. Mapes in this country; and in this way furnishes much valuable matter. But authors do not always agree; and hence there appears some occasional obscurity where the compiler cannot distinctly point out the truth from his own experience. An instance of this want of clearness occurs where he speaks of oblique drains. On p. 149, he says, "Upon the best view the writer has been able to take of the two systems as to the distinction of drains, there is but a very small advantage in theory in favor of either over the other, in soil which is homogeneous." On the next page he gives reasons why draining in the line of the greatest fall is best, "applicable to all lands alike." This apparent discrepancy may be explained, but ordinary readers will be confused. The chapter on "rain and evaporation," presents a condensed assemblage of facts not equalled for value and extent in any other work we know of; yet

these facts would be more valuable if more point and practical direction were given to them.

The author writes with a vigorous and spirited style, when not compiling from others, and he cannot withhold a joke when it appears to the point. He hits clergymen and physicians, but is very careful of lawyers, of whom he is one. On the whole the book is a very interesting one, and with the exception of the few defects we have pointed out, an admirable performance considering the time occupied in its preparation. We advise every one who wishes all the information to be had in relation to drainage, to procure this as the best contribution from the American press on the subject.

Tillage of Heavy Clays—Subsoiling.

In a recent brief article on the "Depth of Plowing," (Co. Gent., June 9, 1859,) we spoke of the importance of first fitting shallow soils by underdraining for profitable culture—commending that process as the best means of loosening and improving lands of this character. There are some clays, however, so heavy and impervious to water, that the drains would need to be very near each other to be effective, and hence would be attended with large expense. A writer in the *Rural New-Yorker*—Z. B. CHOATE of Canada West—gives us some very sensible hints on the tillage of such soils, which we condense below for our readers.

His soil is such, he says, "that if you scrape out a hole below plow depth, the water will stand as in a bowl,"—something like that which JOHN JOHNSTON of Seneca Co., visited some years ago near Niagara Falls, being consulted in regard to its drainage, and which (as he told the writer on his way back,) was so different from anything in his experience, that he could advise nothing in the matter. The water was all on the surface after heavy rains—the subsoil seeming totally impervious to its admission. But to return to Mr. C. on the tillage of such a soil, and the reasons for the course he recommends.

If, says he in substance, you till heavy clay until it is as free as you could desire, at the first rain it becomes saturated down plow depth; in a few days of hot sun and drying wind, it becomes baked as hard as before plowing, and any crop sown on it finds it difficult to make its way above ground—and when it does come up has a poor appearance. Suppose this land plowed five inches deep, it is plain that a rain sufficient to saturate and make mud of this soil, would have less effect upon one plowed eight or nine inches, which is considered a good depth; neither would it dry out so quickly, or become so hard as in the first case. But we frequently have rains that fill the ground to that depth even, preventing all work upon the land for some time, until it slowly dries again. To remedy this, we must use the *subsoil plow*, and by running that so as to break the hard soil six or seven inches below plow depth, allow the water to descend so much deeper and give it a better chance to drain away at the bottom. Then the rain that would fill the soil plowed to the depth of eight or nine inches, thereby rendering it unfit to work upon, would hardly affect it at all.

In regard to the benefits of subsoiling as a preventive of the effects of drouth, we copy his remarks in full:

"Another advantage obtained from deep plowing in clay soil, is found in localities subject to severe drouths, as is the case with us. It will be found if you plow

land shallow, evaporation goes on rapidly in hot weather, and in a few days, at most, after a rain the soil is as dry as before. But on the other hand, if the land be subsoiled, it gives the water a chance to go down in the cool ground below; and we know it must take much longer for moisture to evaporate at fifteen inches below the surface than it would at five—and by its thus evaporating gradually, it leaves the land soft and moist for a much longer period. In fact, you may till a fallow on clay in ever so dry a season, if it be subsoiled, and you will always find it soft and moist, and grain when sown on it will come up rapidly. Some may think the labor and expense attendant on such a course will amount to more than the profit derived from it, but remember that, although it takes strong teams at first, you have it to do but once, for when ground is once broken in that manner, it never becomes as hard again; and in that respect I must differ from my friend that advocates shallow plowing, who argues that ground will settle together harder, from being broken up."

Tobacco Culture.

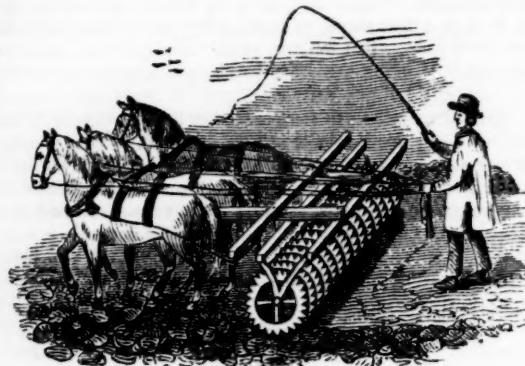
EDS. CO. GENT.—Can you answer me through THE CULTIVATOR, the following questions on the culture of tobacco: Where can the seed be obtained; what time to plant, and transplant; can it be grown in Northern New-York; best kind of soil, and its condition? A SUBSCRIBER. St. Lawrence Co., N. Y.

Tobacco can be grown, and will probably mature in St. Lawrence Co., for we have seen it ripen in the interior of Maine four years out of five; but we would not recommend it as a profitable crop to raise in a locality so far north as our correspondent. It will grow on any soil; but a deep mellow loam, plowed in the fall and cross-plowed in the spring, and well manured, is best adapted to it. Considerable quantities are cultivated in Connecticut, and it is a practice there to put on about thirty loads of barn-yard manure to the acre. The land for planting should be a southern exposure, and the beds should be prepared for seeding immediately after the frost is out of the ground. At that season care should be taken to protect the plants from frost, and after they have attained a good size, and are out the way of frost, they should be frequently hoed. The season of transplanting will vary with the location, but usually in northern and high latitudes from the first to the middle of June. Tobacco requires a mild warm season, and it is therefore very important that the plants should be started as early as possible. The culture of this plant is very much the same as that usually adopted for Indian corn—the plow, cultivator, and hand-hoe, being frequently used to keep down the weeds and loosen the earth. The plants should be transplanted in rows about three and a half feet apart, for it can then be worked with less damage to the roots.

We stated in the June no. of THE CULTIVATOR, that tobacco seed brought from the Island of Cuba, could be obtained free, by addressing Mr. OLIVER T. BRAGG, St. Louis, Missouri, to whom we refer our correspondent for the seed, and also for any further information in regard to its culture, which he may wish.

Remedy for Black Ants.

MESSRS. EDITORS—We have been annoyed for several years, by large black ants in our pantries and closets. We last summer discovered accidentally, that ground coffee was an antidote for them. We continued to scatter it about their haunts through the season, and so far through this; and we are now confident that it will drive them from any locality. They must be followed from one closet to another, till they disappear. M. A. K. Schaghticoke.



Croskill's Clod Crusher.

MESSRS. EDs.—Allow me to correct so much of your reply to the questions of Mr. JOHN A. DOUGHERTY, p. 305, no. of May 12, as relates to this invaluable farm implement. In the autumn of 1851, I had one made by the Messrs. Burrill of Geneva, who had got out patterns from England that season; and I presume they can still make them. Mine cost \$60, and is worth three times \$60 on my heavy clay soil. One year I rolled my wheat in alternate lands with my Croskill and a large wooden roller, and was surprised to see a marked difference in the plants the whole autumn, in favor of the Croskill. As it was all winter-killed, I could not test it further.

A year or two ago, I saw mention made in the Southern Planter of this clod crusher, manufactured in either Richmond or Baltimore, and considerably used in Virginia. The price, however, was nearly double what I paid for mine. W. C. S.

Privy Arrangements.

Near most human habitations a nuisance is tolerated, because it is deemed necessary, which, however, with a little pains, and at trifling expense might be avoided.

As this is not an attractive subject I will state as briefly as possible my own method, and commend it to those who have not adopted a better one.

The building is, of course, located in the back yard; the rear standing flush with the fence that encloses the garden. Instead of digging and stoning up a pit or vault, raise the frame and a wall, a foot or eighteen inches from the ground; or cheaper still, place it on square blocks at the corners, so as to side down to the ground on the three sides next your yard, and if more space is desired under the floor, dig away the earth a few inches before placing the building on the foundation.

Next, construct of plank, a box of the depth of a foot or more, the corners halved and spiked together with large nails, or otherwise strongly made, and of dimensions to occupy the space beneath the floor. This box is mounted on four cast iron wheels, or castors, two or three inches in diameter, which with the proper fastenings, you will procure at a few shillings cost at the hardware store. For this to run on, lay down a couple of plank, extending out a few feet in the rear of the building, on which nail a strip of board outside the wheels to keep them from running off the track. The car furnished in this manner is easily drawn out, and pushed back to its place as occasion requires.

From some neighboring marsh or pond hole, when dry and light draw a few loads of muck, or for lack of this any other earth, and pile in a heap near where the box is to be drawn out. Cover the bottom of the

box with the dry muck or earth, and your arrangement is complete, more convenient than a deep pit, and at less expense.

As often as necessary, draw out the dirt car, shovel the contents on an Irish dirt barrow, wheel it off to a convenient place for a compost heap and dump it down; always using sufficient earth, lime, ashes, plaster or something of the kind to keep everything covered that would be offensive to sight or smell. This, by the by, should be one of the chores to be attended to, and not neglected, and if not unreasonably neglected can be done by man or boy in five minutes time.

By this simple method a nuisance often intolerable, is not only got rid of, but turned to valuable account. ■

Early Melons and Squashes.

Melons, cucumbers and squashes, as gardeners well know, are very difficult to transplant. Their roots quickly spread in every direction, and they are sensitive to the mutilation they must necessarily receive when the work is done in the ordinary manner. Various expedients have been resorted to. One of which has succeeded tolerably well, is to plant the seeds in an inverted piece of turf, embedded in the earth of a hot-bed, and before many leaves are made, to remove the young plants, with the pieces of turf, to the open ground. There are but two difficulties here. The turf does not allow the plants to become large enough before removal; and grass is apt to spring up from the pieces.



Fig. 1.



Fig. 2.



Fig. 3.

A better way is to make small open baskets, set them in the hot-bed, and plant the seeds within them. The baskets do not impede the roots, and when the plants are large enough, the whole, basket, earth and plants, is removed and set in a hole previously cut in open ground. The baskets are easily made by tying together with twine, as shown in fig. 1, two basket splints, basswood or other bark; then with another piece tied together at the ends, form the hoop, fig. 2; thirdly, bring the ends of the two first mentioned pieces down over this hoop, tying by twine, and the basket is made, fig. 3. If the soil is light and friable, it will be necessary to interweave a few more splints or twigs; but if tenacious, a more open basket will do. An active hand will make many of these baskets in an hour; and they will not only give earlier results, but save largely from squash bugs and other insects. ■

To Prevent Bee Moths.

MESSRS. EDITORS—The Co. GENT. of May 26th, contains an inquiry of B. J. T., of Tennessee, whose bees are disturbed by moth worms, to which I take the liberty to reply. My suggestion is that about four or five days after they have swarmed (the period of swarming being, in this latitude, about the 15th of June,) or in about 15 days after they should have swarmed, in the middle of a clear, warm day, when the thermometer indicates 90° and upwards—put on thick over-clothing, veil and stout leather mittens, and turn the hive at an angle of 45°, or nearly upside down. Break out the brood comb, one piece at a time, and pass it to an assistant to brush off the bees. Then take it quickly to a dark room, place it on a tea-tray, on which slats have been previously placed, to save any honey or bees which may be attached to it. In case any bees should be found in the comb when in the room, have a small aperture in the shutter for them to pass out. Replace the hive, and the following day you will find the bees vigorously at work, building up a new comb. Keep the boxes on at all times during the honey making season. The brood combs should be taken out every year, and never left beyond the second, as they become black and filthy, and unfit for them to breed in. AMOS FISH. Albany, N. Y.

Mr. Alexander's Annual Stock Sale.

LEXINGTON, KY., JUNE 1, 1859.

L. TUCKER, Esq.—Mr. ALEXANDER's fifth Annual Sale of Short-Horn cattle and South-Down sheep, has just closed. Mr. KELLY, CORNELL, OLcott and JOHNSON, of New-York, and GEO. HARTSHORNE of New-Jersey, arrived here last evening. I was delighted with Kentucky after I had travelled about 150 miles, and reached Bourbon county, and the far famed blue-grass pastures near Paris. The fields, studded with shade trees, and superb herds of Short-Horns scattered over them, presented a picture of itself which amply repays a journey here. Extensive fields of wheat and winter barley are seen, and generally promising a rich yield—the grain fully headed in many fields—and should the weather prove favorable a large yield will be given. But corn is the crop of Kentucky, and such fields are seldom seen at the north. The fields were being cultivated with the cultivator for the first time, and looked very promising. Occasional fields of hemp, oats and rye are seen; but in Bourbon and Fayette, wheat and Indian corn are the leading crops, though winter barley I think is receiving considerable attention. The meadow land is not extensive; the corn in this state answering mainly, I presume, for feeding cattle. Their pastures are beautiful. Blue grass and white clover will turn out Short-Horns for the shambles, which no country can excel—and I am happy to say that the red top or June grass of New-York and white clover, is apparently, and I think really the same—and our pasture fields may be as rich as these in many parts of our state, as they are now in Putnam and Dutchess, and in Steuben and some other counties.

We went over to Mr. ALEXANDER's farm, about 15 miles from here, this morning, and found everything in order for the sale, and a collection of about 500 gentlemen. Among others were Vice-President J. C. Breckinridge, Hon. Jas. B. Clay, W. R. and Jeremiah Duncan, Mr. Shelby, Mr. Warfield, Mr. Mallory, Mr. J. R. Jones, Mr. Geo. W. Scott, late Secretary of the State Ag. Society, and the present Secretary, Mr. W. D. Gallagher, Mr. Byram of the Valley Farmer, Louisville, and many other gentlemen largely interested in cattle breeding. The cattle were all labeled with the numbers of the catalogue, and at 11 o'clock *precisely* the first animal appeared in the ring and was offered for sale, a *practice* that should ever be observed at public sales. Mr. Alexander announced at his house that this would be done, and it was to the letter. There were no purchasers out of the state, except those from New-York, and one each from Ohio and Indiana. The western people who usually attend these sales from that section, did not appear owing probably to the money pressure which still prevails there. The bulls were sold first—all but one, who was so unmanageable that he could not with safety be brought into the ring.

Twenty bulls were sold, bringing \$2,720—the highest priced, \$355, descended from the Balgo stock, which is a favorite here—the whole averaging \$131 each.

The cows and heifers were sold, twenty-three in number, bringing \$2,715, and averaging \$129, and upwards—the highest priced heifer, Cherry 3d, a beautiful animal, \$335.

The following animals were purchased by New-Yorkers:

W.M. KELLY, Rhinebeck—for himself:
Mansfield, roan bull calf, 9 months old, sired by Fordham Duke, \$90
Miss Walter 2d, 6 years old, roan, 170
Mary Martin, 2 years 6 months old, roan, 50
Miss Wiley, 1 year old, roan, 100
Verity 3d, 8 months old, white, 95
Hope, 7 months old, red and white, 50

For Hon. A. B. CONGER, Waldberg:
Prunella, imported, 4½ years old, roan, \$250
E. CORNELL of Ithaca, for himself and friends in Ohio:

Bull Mortimer, roan, 8 months, by Fordham Duke,	\$50
Cow Hannah, roan, 1½ years old,	100
do. Mary Bell, red, 1½ years old,	60
do. Mary Carr, red, 1 year old,	120
do. Hostess, roan, I believe, 1 year old,	95

The purchases by these gentlemen were very judicious, and if I am not much mistaken, will be heard of again in some other States, in competition for laurels to be honorably won. Mr. Kelly and Mr. Cornell, I believe, purchased the largest number of animals of any purchasers at the sale.

Mr. Alexander sold eleven South-Down yearling bucks for \$384—averaging nearly \$35 each, and three Cotswold bucks for \$56.

The whole amount of sales:

Bulls,	\$2,720
Cows and heifers,	2,715
Sheep,	384
	\$5,819

Although these prices are not large in the aggregate, I think, considering the times, the sale is not a very discouraging one.

The breeding stallions, "Lexington," "Seythian," imported, and "Review," were shown in the ring in fine condition, and attracted much attention. Lexington is limited to 75 mares at \$100 each—has already served 64. Seythian is limited to 60 mares at \$75 each—has already served 38. Review has served 35 mares at \$50 each.

Mr. Alexander has 50 thorough-bred breeding mares. The income from the horses must be very large. Mr. Alexander has a splendid farm, and in fine order and very attractive. Will give you particulars hereafter. Our reception in Kentucky was most cordial and gratifying, and we were greatly delighted with the trip, new acquaintances formed, and new views impressed upon us of the immense advantages and resources of the Western country, especially of the States of Kentucky and Ohio. B. P. J.

Cheap Paint for Buildings.

EDS. COUNTRY GENT.—Inquiry is made for a cheap paint for outside of houses and fences. The following receipt is cheap and good:

One bushel unslacked lime.

Half a gallon salt.

Three pounds alum, powdered.

Three pounds salaratus.

Mix and put in a tight barrel with one head out. If the lime is quite fresh, cold water—if not, then use hot water. Keep stirring while slacking, adding water as required, so as not to become dry at any time. If it heats dry it becomes lumpy, and must not be overflowed with water so as to prevent the slacking going on. Stir up well from the bottom. When finished it may be thick as mush. When to be applied by a brush, make the mixture the consistency of whitewash—about the thickness of cream. Apply the first coat very thoroughly, filling every crack or interstice between the bricks or in the boards. For wooden fences a second coat of the same material is all that is required. Those who desire to have some other color than white, can add coloring matter to taste.

FOR BRICK HOUSES.—For the second coat, add to the first named materials 12 pounds of melted tallow, and mix as before. This coat is impervious to water—is brighter, looking clean longer than paint, and preserves the cement between the bricks better than paint. It costs but little to renew this, say once in three or four years. A neighbor of mine washed his two story brick house, about 40 feet square, seven years ago, and again this spring. He is an old gentleman. It occupied himself one day, and a hired man half a day for this one coat. He says if a painter offered to paint gratis, he should not do it, for reasons given in foregoing. The difficulty, if any, is in the mixing of the materials properly. It cannot fail to please, especially on the brick. ISAAC DILLON. Zanesville, O.

Hay and Hay-Making.

Of the importance of the hay crop we need scarcely remark—save that its value exceeds that of any other product of the northern section of our country. That this value might be largely increased without extending the area devoted to grass, or giving more time to its manufacture into hay, can scarcely be doubted; for the value of hay, as food for stock, accords with the care and judgment bestowed on its making, and the difference between hay and straw is not so much in the plants themselves, as in the stage of growth in which they are cut, and the curing they receive. One farmer may keep his stock in thriving, fattening order through the winter, while another, although he feeds the product of more acres of meadow, shall find them constantly failing in condition. The first has hay made in the best manner, and “of such a quality, that a given quantity of it will produce nearly as many pounds of meat or milk, as the grass itself would have produced if eaten in a green state.”

In what stage of the growth of grass it shall be cut, and the manner in which it shall be cured, have long been acknowledged questions important to the practical farmer, though as yet no decisions in which all acquiesce, have made any one practice the general one. Some cut in the season of flowering before the blossoms have fallen; others not until the seed has formed; and others still, defer the operation (with some grasses,) until it is fully ripe. Some cure by exposure to the sun, as rapidly as possible; others seek to perform the same process with the smallest expenditure of labor; and others still would keep the hay as fully shaded as may be while drying. Each class bring arguments to sustain their methods of procedure, both in cutting and curing; but to our mind, chemistry and practical analogy teach us valuable lessons on the subject, which, in a condensed form, we shall attempt to present to the reader. We may state that our attention was first drawn particularly to the subject, ten years since, by an article in *The Cultivator*, giving extracts from a scientific report made by Dr. Thompson for the British Royal Ag. Society.

Chemistry shows us that all plants contain the largest amount of matter soluble in water, at the period of flowering, and that the sugar and gluten of the grass, and a few other soluble ingredients, constitute its chief value as food for animals. These rapidly diminish as the seed forms, changing into insoluble woody fibre, and the hay, which should as far as may be resemble grass in its most perfect state, is worth much less if not made until after that period. There are but few exceptions to this rule, but we believe the Kentucky Blue grass, the June grass, and some others which furnish but a light amount of stem, and are most valuable for their leaves, which continue growing through the summer, may stand past the flowering stage without loss.

The advocates of ripe hay bring as an argument in their favor, the fact that such hay yields the greatest amount of extract when boiled, and that therefore it must contain most nutriment. It is found, however, that boiling very imperfectly imitates the process of digestion, and experiments with the living animal confirm what chemical analysis teaches, that the best hay is that cut and *properly cured* at the period of blossoming.

That process of curing which shall most perfectly retain the nutritive properties present in the plant, is the

best process. We do not wish to change or evaporate the juices of the grass, but only to dry out the water. In drying herbs for medicinal and culinary uses, the experience of many centuries teaches that *drying in the shade* is the only way to accomplish the desired object. In making hay this cannot be entirely accomplished, but the plan which most nearly secures it—that of curing in the swath and cock—is a good and safe one; advantageous also, as requiring less exposure to injury from rain than any other.

Clover hay and coarse herdsgrass especially need to be cured in the shade, as they bear little handling while dry, without loss of leaves and blossoms. When mowed, let the grass get fairly wilted and all external moisture dried off while in the swath, with perhaps a single thorough shaking up and spreading, and then put into cocks, and it will be cured with very little loss of value. The partial fermentation or “sweating” which it undergoes, causes but slight change in its constituent parts—save that it separates the water therefrom—and after standing thus for twenty-four hours, it needs little or no after-tending to prepare it for storage, and has far less of that harsh and strawy character than it would possess if cured in a different manner. In curing by this method, care should be exercised that the hay is not put up before it is fully wilted, and that the cocks be small and well constructed, so that the sweating process be not carried to an excess, and induce so great a fermentation as to decompose the sugar of the hay, changing it to alcohol and carbonic acid, both of which soon evaporate.

The weather has a great influence on the value of the hay crop, but this we cannot long foresee, or at all control. If it should prove unfavorable and constantly changing, we have found that hay already cut had best remain in the swath—retaining its value thus unstirred, much better than with repeated dryings and wettings. Nothing so injures hay as washing by rain, and this, if many times repeated, will totally destroy its value as food for animals. The provision of hay-caps should not be neglected. These will often enable the farmer to secure hay in good order, which would otherwise be seriously injured. In getting in hay imperfectly cured, if it can be allowed to stand for twelve or fifteen hours in the load, it will become better fit for storing. It will probably heat slightly in that time, which will be arrested by the process of unloading, and leave the hay sufficiently cured for the mow.

Good tools and good workmen are essential to the economical performance of hay-making. There is more ease, as well as completeness, with the good workman in the performance of his labors, and good tools are also a great aid in these respects. Order and readiness in the whole round of preparation, give largely increased facilities for pushing forward this and all other farm operations. It is important to secure ample means to do every thing as and when it should be, since so much depends on the right curing and securing of this great product. The general use of mowing machines and other labor-saving implements, render farmers to some degree independent of manual labor, often difficult to be secured, and always dear at this season of the year. These improvements will often enable the usual laborers of the farm to secure in good order, fifty acres of meadow more readily than they could have got in ten without their aid.

HAY CAPS.—I used one hundred last year, and like them so well that I shall procure more this season. C. W. G.

Red Top and June Grass.

Writing "About Grass," in the *Rural New-Yorker*, H. T. B. of Wyoming Co., says "red top is well adapted to wet land, and should be propagated with more care—its seed is seldom saved for sale or sowing." This is very true of Western New-York. New England farmers make more account of it, and we believe find it profitable to do so. In Western New-York, it frequently "comes in of itself" on swampy land, and if cut at the right time makes very palatable hay. It should be cut while yet red top, and before so bleached that the heads are nearly white.

Of June grass he remarks, "It is not considered respectable, * * but it covers many an acre, which would never be seeded except on the "voluntary principle." Under favorable circumstances it makes a very good growth, and is valuable as early feed. Where it predominates in meadows, it should be cut by about the middle of June, or as soon as the seed is formed, and it makes exceedingly nutritious hay." This grass is the same as the far-famed Kentucky blue grass, and should receive better consideration among farmers.

The "Ingalls' Cow."

MESSRS. EDITORS I notice considerable has been said in the *COUNTRY GENTLEMAN* recently, about the Oakes cow, and the great amount of milk and butter which she yielded. I wish to present to the readers of your journal, an account of a remarkable cow, formerly owned by Hon. Hanibal Ingalls of Mercer, in this state.

In 1847 an account of this cow was published in the *Maine Farmer*, containing a statement given by Mr. Ingalls, of the yield of his cow in milk and butter, for fourteen days, ending June 27, 1847. This I will copy:

	Lbs. Oz
First week—whole weight of milk,.....	353
Average per day,.....	50 7
Greatest weight in one day,.....	53 8
Whole weight of butter, 1st week,.....	19 10
Second week—whole weight of milk,.....	367 4
Average per day,.....	52 8
Greatest weight in one day,.....	56 4
Whole weight of butter, 2d week,.....	21

making forty pounds ten ounces of butter in fourteen days, requiring eighteen pounds of milk to make one pound of butter.

The Ingalls cow was of a native breed crossed with the Durham, at this time was nine years old, of good size, gentle and kind.

The history of this cow is thus given: "She was calved December, 1837. Her mother is described as being a small black cow of the native breed. She had a calf when two years old, and at that time gave a very large quantity of rich milk, and continued to increase in milk until she was six years old. She then began to run down, and finally got so feeble that she could not get up alone; all of which time she gave more milk than two other cows which were considered *first rate*. Neither her milk or butter was ever weighed, but it is thought she gave as much as the "Ingalls cow." When about worn out she was disposed of to Mr. Newcomb True of Mercer, who with great care and nursing succeeded in raising from her one of the best cows the country ever afforded—the "Ingalls cow." No reason can now be given why she and her descendants proved themselves so much more valuable for dairy purposes than many other cows of this country."

In view of the above facts, I very much regret that a complete statement of the yield of the "Ingalls cow" for a whole year, and the average per day for that time, was not given by her proprietor. I will just say in concluding this brief article, that our dairy cows can and must be improved. Can we not have at this time, as good cows for the dairy as former times produced; are we progressing in this matter, or are we going backward? Is there no encouragement for breeders to produce extra milkers? Do we not have frequent inquiries for milch cows? Are not these things of considerable importance?

Take *The Alders, Somerset Co., Maine.*

Two Receipts.

EDS. CO. GENT.—I send you two receipts, worth more to your farming readers, than the Co. GENT. will cost during one's life time.

I—Remedy for the Hog Cholera.

Four pounds sulphur.
Four pounds Madder,
Two pounds saltpetre.
One pound black ammonia.

Mix together and give a tablespoonful two times a day, in milk, gruel, or anything they will eat it in. Should they be too far gone to eat, drench them with it, and my word for it they will have no hog cholera.

II—For Poll Evil, Fistula, Warts and Corns.

Three gills alcohol.
One ounce aqua fortis.
One ounce spirits turpentine.
One ounce corrosive sublimate.
One ounce camphor.
One viol oil of spike.
One ounce castile soap.

Mix together in a strong bottle, and shake well before using. Wash the affected parts well with the soap suds once a day, and apply the above preparation until it is cured. F. POUND. *Ballett Co., Ky.*

Bite of Musquitoes, &c.

Oil of Pennyroyal, rubbed on the face, hands and parts exposed, is said to be a preventive for the bite of gnats and musquitoes. It should be properly diluted with some sort of spirits, as if used in its concentrated state, it will cause the skin to smart for awhile. This preparation seems to be highly offensive to their gnat and misquitoships, and they leave in disgust. C.

The Rose Slug.

There is a remedy for the rose slug, which has for so many years infested our gardens. It is the leaves of the *Ailanthus* tree boiled. Sprinkle the bushes with the water early in the morning, when the slug is on the top of the leaf, and it will effectually destroy them without injuring the foliage. S. O. *Sag Harbor, N. Y.*

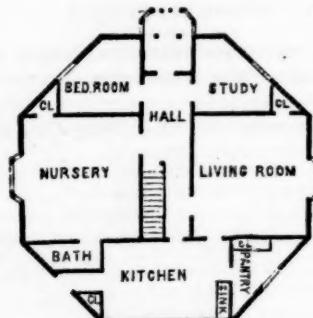
Bees in California.

The June number of the *California Culturist* contains an article in regard to bee culture in the vicinity of Napa city, as practiced by Mr. T. G. Baxter, who purchased in April, 1857, ten hives of bees, and on the 24th of March, 1859, they had increased to forty-four, or thirty-four hives of young bees. We copy a portion of the article to show the great yield of one hive for a single year:

"Three of his hives—which are those having moveable boxes at top—were left without boxes as places for storing honey; of course, the bees had but little labor to perform beyond that of their own support and the raising of young bees. Seven swarms were allowed the top boxes to work and store honey in, which they did to the amount of several hundred pounds. And yet there was no apparent difference in the breeding, between those having extra labor to perform and those that had not. From one hive he obtained five young swarms in a season; one on April 21st, May 5th, May 6th, and on May 9th two swarms; whilst these young bees afterwards turned off the same season three swarms more—making the entire increase eight hives from the old one."

Product of Ten Cows for one Year.

MR. WILLIAM J. FERN of Cincinnati, Ohio, furnishes for the *N. E. Farmer*, a table of figures showing the product of a small dairy of ten cows, for one year, ending with May, 1858. The cows were of common stock, costing from \$25 to \$30 each. In winter they were fed liberally with straw and wheat bran with corn meal, and in summer with bran and good pasture. Feed was given them dry and cold, and the stable open enough to be well aired. Cows were only housed in the winter. The sales are, of cream, at one dollar per gallon, to confectioners—and of skimmed milk at 12 cents per gallon, to boarding houses—the result of the figures being as follows: Total amount \$1,258.25, being an average for each cow of \$125.82 $\frac{1}{2}$.



Octagon House.

I send herewith a plan of an Octagon house, designed to meet the wants of such as desire the number and kinds of rooms named in the 3d list of Annual Register, Vol. 3, p. 315, and in accordance with the rules in said article as well as with the rules given in Annual Register No. 2, p. 178. The plan needs but little explanation. Scale, 32 feet to an inch.

The kitchen will receive full light from its two windows, and from the glazed door opening into the pantry. The dish-closet opens into the living-room, and into the pantry. Iron closet under sink. Door to cellar opening from the kitchen, under the stairs.

The Parlor is placed up stairs; this is to be allowed in accordance with rule 4th, Annual Register, No. 3, p. 316. I would say, that in the country where such a room is but little used, that it should always be placed there. The plan of the second story may correspond with that of the lower, or otherwise, as fancy may dictate. H. T. VOSE. Jackson C. H., Ohio.

How to Prevent Wheat Turning to Chess.

MESSRS. EDITORS—I am sorry that Mr. CLISBE misread my article about chess. I never thought or said he was so unpardonably stupid that he did not know clean wheat, or chess from wheat; and I have no doubt but Mr. C. and every other farmer can clean chess out of wheat as well as I can if they take the same way to do it. I no sooner learned how to clean it, than I immediately told my neighbors, as every one of them then believed that wheat produced chess, and I think none of them now believes it. But Mr. C., or any other farmer, has to do more than merely clean the chess out of the seed. They must see that neither their cattle, horses or hogs *roam* over their fields when they have a chance to eat chaff in which there may be chess. Sheep digest everyting; nothing that passes through them will vegetate; still they may carry out chess or other foul seeds between their hoofs, and even on their wool. Again, taking the manure out of the yards unfermented, will take out a large quantity of chess seed that will vegetate.

Cleaning the seed thoroughly, is the first point; but when I first became sure that wheat would not produce chess, I not only heaped and fermented the manure, but I again turned the heaps in the end of June or early in July, generally in showery days during hay and harvest. After being turned they again fermented, and then if chess seeds were sound on the outside of the heap or that laid on the ground under the heap, they had another chance to be destroyed. By proceeding in this way I got free from chess.

One year I was pulling stumps with a screw-machine, and had often to open the fence in order to set the machine for stumps near the fence; we did not finish until winter set in, and the fence laid open all winter. The neighbors' cattle were often in the field during

winter. After that, for two or three crops, I had some chess. Another field, which I brought firewood through during winter, laid open, and many neighbors' cattle were in it during winter and spring. The first wheat crop after that, had a little chess. My second crop is now growing there, and I hope I may have no chess. Again, in that dry season, 1854, neighbors brought their cattle and horses to water at a well I had in a field. There I had a little chess in the next wheat crop. Although very few of the farmers around here raise much chess, yet several raise some. It requires care to get rid of it, and care to keep clear of it, if your neighbors raise it. But if the seed is made perfectly clear of it, I believe any novice will soon see that it won't grow where the seed was not deposited in some way.

I have to write often on the same subject, to get at all the arguments I should use in such a case. I have often thought I should never write more on chess, and I think this will be my last on that subject, as I believe I have said all I can say about it.

I have just had a letter from St. Lawrence Co., asking about chess, and stating some cases. I have also heard from a farmer in Canada, telling how he cleaned his wheat seed on my plan, and that he has nearly cleared his farm of chess. When at you city some six weeks ago, if I had known where Mr. Clizbe resided, and if near the railroad, I would have called and seen him, as I would like to see the land and the man who can raise chess from wheat. There are two fields in this neighborhood that, 20 years ago, were sown with good sound seed wheat—one of them immediately adjoining one field of mine. One field produced neither wheat nor chess—the other produced chess, but no wheat. The owner came to enquire of me what was become of his seed wheat, if it did not turn chess? I referred him to this other field, and asked him why there was no chess there. I had no doubt but I knew the cause of the non-vegetation of the wheat in both fields, but this chessy article is too long already. JOHN JOHNSTON.

We hope that friend JOHNSTON will not tire in the good work in which he has been so long engaged. We have combatted this doctrine of transmutation as often as once a year for near thirty years, and we cannot consent to the withdrawal of so efficient an aid as Mr. JOHNSTON has proved himself to be, while such large numbers still hold so pertinaciously to this error—an error deeply affecting their pecuniary interest; for few, if any, farmers who believe that wheat will produce chess, will make the necessary efforts to eradicate the chess plant from their farms. To any wheat-grower who believes in transmutation, the above communication will be worth ten years subscription to the Country Gentleman, if he will adopt the course Mr. JOHNSTON recommends, as he will thereby in all future time prevent his wheat from turning to chess.

Muck as a Manure.

"W." of Utica, asks (Co. Gent., March 24,) "if muck taken out of its bed and spread upon adjoining dry and light but worn soil, would benefit it for oats this spring." It is well answered that "the result depends upon the character of the muck, and also on the land to which it is applied." Let me state a few facts in my own experience in applying muck unmixed to the soil and at the same time with stimulating fertilizers.

A few years since I drew from a mucky pond (nearly dry in dry summers) seventy-five loads of muck on a gravelly loam barley stubble, which, owing to a failure to "catch" well in clover, we thought best to plow up

for winter wheat. It was spread at the rate of twenty loads per acre, and then plowed in. The crop upon that part to which it was applied was thought sufficiently superior to the remaining portion to pay the expense of the application, and the growth of clover since has been rather the best on the muck dressed part.

In another case muck was drawn from the pond in the fall, and spread and plowed under in the spring for corn and potatoes. The effect was more marked than in the previous instance—owing, no doubt, to the exposure of the muck through the winter to the action of the air.

Four years ago, on a dry, light and worn soil, we had muck applied from an old cranberry marsh, at the rate of thirty loads per acre. Over this was spread about one-third the quantity of leached ashes, and the whole carefully plowed under. Only a portion of the field was so treated, and the whole was planted to corn. The crop on the dressed part was double that of the undressed, and estimated at forty bushels per acre. The application has been of permanent benefit to the soil, and has been extended over the whole field, with unleached ashes, however, and in smaller quantity.

For light, loamy land, muck should be plowed in and well mixed with the soil. Its greatest value, we think, is found when composted with barnyard manure; for this purpose its value can scarcely be over estimated. Its character is variable, but this is readily determined by the vegetation it produces. One swamp near us abounds in sorrel, and the muck is decidedly acid when dug from any depth. But this part of the subject has already been treated at length in former numbers of your journal. B.

As a further experiment in the use of muck we condense a statement made by a correspondent of the *Rural New-Yorker*. In 1858, he drew from a tamarac swamp, upon high, warm, loamy land, sufficient muck to cover the greater part of a nine acre lot, and finished the field with barnyard manure. The muck was taken from a ditch in the winter, and allowed to lie in heaps until spread for plowing the first of June. The lot was planted to beans, and cultivated in the usual way—the crop was a good one, and completely covered the ground. The beans were rather better where the muck was applied than where the ground was dressed with manure.

Long-Wooled Sheep.

EDITORS COUNTRY GENTLEMAN—As the English long-wool sheep is now attracting considerable attention, and many farmers debating the policy of their introduction, I concluded I would weigh the wool as it came from my flock, and publish the same to the world. My yield is a fair criterion of the yield of this race of sheep, as all ages and sizes are included. My oldest ewes yield as low as 4½ to 5 pounds each; they are 7 years old, and have bred regularly since they were two. The same animals at yearlings produced from 10 to 12 pounds to the fleece. Their treatment, to a northern man, would seem to be bad when I assert that this flock of twenty-nine head were never fed *one feed* of grain or hay during the entire year past; in fact they know not what hay or grain is, but have lived on grass alone, and without shelter. The Kentucky blue grass will keep sheep fat the year round, and the great difficulty in its use is that if a breeding ewe loses her lamb by death or accident, she is apt to prove ever afterwards barren from too great an accumulation of fat, and we are compelled to consign her to the butcher. I have reared this race exclusively for several years past, the carcass being the leading object, but find that the wool will pay the cost of keep, leaving me a carcass of more value, *pound for pound*, than first class corn-fed beef, and this mutton, of

course, is clear profit. Assuming that the same amount of food required to make one pound of beef will make a pound of mutton, the discerning feeder or grazier must see at a glance the vast advantage of the sheep over the bullock. The latter must be charged with the entire cost of his food during the process of his growth and fattening, while the former by his annual wool clip pays his own way. The New-York market tells the tale as to their comparative market value; first quality mutton always commanding as much per pound as the same grade of beef, and generally from one to three cents more. My entire flock (nursing ewes excepted) are first quality mutton, as fat as No. 1 corn fed bullocks, and worth as much per pound, and made on grass alone, and that grass paid for by the wool clip.

As an agriculturist I am a great stickler for *facts*, and abhor mere *theories*. I have furnished you with the facts in regard to this race of sheep with but one assumption. It remains to be *tested* if a given amount of food fed to bullocks and sheep will yield equal amounts of *butcher's meat*. My opinion is that no animal will yield a greater return in butcher's meat, for the food consumed, than the English long-wool sheep, and including the Downs; yet as I have never tested it by an actual experiment, it is mere opinion, and can only go for what it may be worth. See appended table:

Table of Weights of the Fleeces of 29 head of Stock Sheep—pure Cotswolds—as shorn on the 12th of May, 1859, and weighed in the grease, but free from tags, burs, or trash, and in merchantable order—sold on the farm at 25 cents per pound.

No. 1,	5 lbs.	}	Ewes nursing, and over 5 yrs. old.
2,	5½ "		
3,	4½ "		
4,	4½ "		
5,	6 " "		
No. 6,	8 lbs.	}	Ewes Nursing, and between 2 and 5 years old.
7,	6 "		
8,	7½ "		
9,	6½ "		
10,	6½ "		
11,	8 "		
12,	8 "		
13,	10½ "		
14,	8½ "		
15,	7 "		
16,	6 "		
17,	7 "		
18,	6 "		
19,	6½ "		
20,	6½ "		
21,	7 "		
No. 22,	11½ lbs.	}	Yearling Ewes, first clip.
23,	12 "		
24,	10 "		
25,	11½ "		
26,	10½ "		
27,	10½ "		
28,	13 "		
No. 29,	21 lbs.	A 3-yr. old Buck, & 2 yrs. growth.	

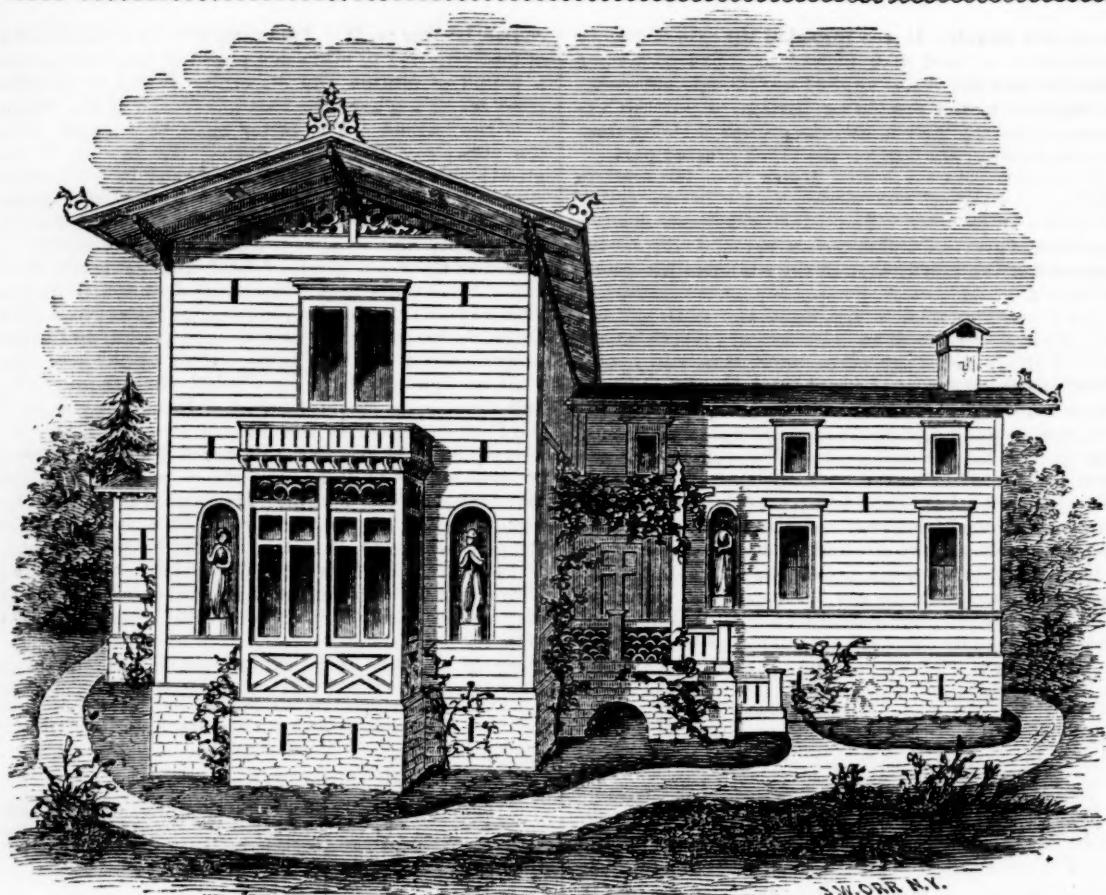
Total, .. 240½ lbs., or 8 3-10th lbs. average.

Fernleaf, Mason Co., Ky. ANTHONY KILLGORE.

Butter Salt.

If a farmer brings a choice article of farm produce to market, he should insist upon receiving a price for it corresponding to its quality. There is, perhaps, more difference in the quality of butter than in any other article. It may be well worked and put up in fine style, but much of it is spoiled with too much salt, and often by using too coarse salt. It should be ground fine, be pure, and the butter for market better be not salt enough than too salt. We find in the *N. E. Farmer*, a receipt for preparing dairy salt, furnished by a Vermont correspondent of that journal, to whom it was introduced by an experienced Scotch dairyman:—

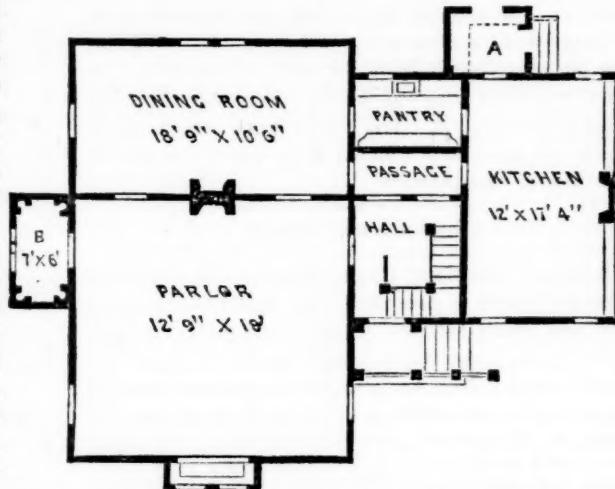
Take the best crystal salt, wash it, dissolve, strain, settle and turn off; boil it down in some perfectly clean iron vessel, skim as boiling; when stirred off dry, it will produce fine salt, white as the drifting snow, which if stirred up in a glass of water, will produce no sediment, and will be distinct from any mineral or other possible impurity.



New American Style of Villas and Cottages.

MESSRS. L. TUCKER & SON—In attempting to originate an American style, I have cherished the same motives that have prompted other foreign architects to the same task with their respective countries, and as we are beginning to appreciate what is true Art and the beautiful, I have reason to believe my efforts towards the production of an American style, will not fail to be recognised by every lover of art. In conceiving this style, my aim has been to gain a characteristic of the manners and customs of the people, a character of the interior represented by certain details on the exterior, and a unity and harmony with masses and details. As this example is but an introduction, and quite miniature—nevertheless I have here shown every characteristic that is found on the larger examples. In regard to the character, I will describe it briefly. This design is the residence of a village merchant—characterised by the liberality of the details—the statues (being of terra cotta,) giving it an air of refinement and love of art.

In regard to the character of the interior rooms by details on the exterior, I have shown a representation for the parlor by the bay window and statues, being the richest part externally, as it generally is interiorly—dining room by a wide window and its details, kitchen disguised from its situation (in this instance.) The entrance a distinct and interesting object of itself—the main bed room by the wide window over parlor and the servant's rooms by the diminutive windows. In regard to the plan, which is the owner's requirements, we enter a large hall, doors to every room; a beautiful staircase in the hall—(landing of stairs is over front door)—dining room communicates with kitchen by the two passages, one by hall passage, the



other by the butler's pantry—kitchen has a large fireplace—sink on one side, dresser on the other. A is a wood house if desired. B is a boudoir room for the purpose of the lady of the house entertaining her morning visitors without using the parlor. On the second floor are four bed rooms, closet to each, and door from each room to hall stairs. I have also provided a linen closet and store room besides. Combined with all of these comforts is a beauty in every detail, line, and color; and I trust that this miniature example will convey a comprehensive idea of my attempt towards the production of an American Style of Architecture.

The cost of this example was \$2,200 complete—the interior finely finished—but I can reduce by a plain finish, to the cost of \$1,800. (See advertisement.)
LAWRENCE B. VALK, 627 Broadway, New-York.

Editorial Correspondence.

As we stated in **THE CULTIVATOR** for May, the Junior Editor of the **COUNTRY GENTLEMAN** and **THE CULTIVATOR**, left New-York in the Steamship Vanderbilt on the 23d of April, for Europe, where he is to spend the summer in an Agricultural tour through some portions of the Continent and Great Britain. His letters, which are published in the weekly nos. of the **Co. Gent.**, are quite too extended for the limits of our monthly sheet. We shall, however, give such extracts from them in **THE CULTIVATOR**, as we can make room for without crowding too much on other matters.

From his first letter, dated on board the Vanderbilt, at sea, May 2, we extract the following description of

The Ship and its Accompaniments.

I am now writing in my "state-room," whose exterior admeasurement I take to be precisely six feet square at floor, and seven feet high to ceiling. Each of the two large *cylinders*, the heads of which will probably first attract our attention in going to see the engines, might make nearly a couple of such apartments. They are 7 feet 6 inches diameter, and 12 feet in height—or, as it is termed, in the stroke of the piston rod. As fast as the steam is exhausted on one side and admitted to the other side of the piston, the rod performs its ascent or descent, carrying with it its end of a lever called the *walking beam*, at the other extremity of which plays up and down the arm that turns the heavy shaft of the big wheels that carry us along. In this simple outline we have the shadow of that real power, with its manifold niceties of arrangement, and combinations of arms and valves, and packing and oil, which it took some five or six thousand years for the mind of man to achieve, and which while rated in comparison with animal power,—the engines before us being considered equal to 3,000 horses, accomplishes tasks that mind before could not conceive, or even those strong arms work out that piled the time-defying pyramids. The engines before us work with that superhuman constancy and tirelessness; with that regularity and stillness of progress, that one can but wonder whether some process had not deprived of all their weight and inertia, the solid metals of which they are constructed. The paddle wheels are about the height of a common four-story house—their diameter being 42 feet. They are 10 feet wide, and when the ship is loaded, dip about 9 feet into the water, so that it will be readily seen that considerable power must be required to make them revolve their huge circumference 12 times per minute. This they do with a uniformity almost perfect, the number never having varied more than between 12 and 12½ revolutions to my knowledge, and I have timed it frequently. There is a dial, too, which records every turn of the wheels in the steamer's course, and from which we learn that about 180,000 times is requisite to traverse its ocean road. Turn away, then, merrily, ye stately discs! Bring us soon where there shall be no longer this ceaseless undulation and jarring of movement, and where earth can once more give firm footing to her errant sons.

It is the next inquiry that arises in the mind, where and how is generated the steam that does all this? For 200 feet from the forward end of the two forward boilers to the after end of the two others, away down under the lowest deck, itself 18 feet from the ship's bottom—lie stretched the four which do the heating of our steam. In the part of the 200 feet between and unoccupied by the boilers, there is not wanting enough to fill the space. Thirty-two furnaces are every day resolving into heat, (not to mention the smoke and ashes,) a hundred tons or over of coal. Three gangs of fourteen men are constantly feeding their glaring mouths, watch by watch, and we see them turning here and there with the alternations of fiery light on the grim face, or stout shoulder, or burley frame, in a picture which an imagi-

native artist might take for a study, and clothe with a kind of infernal horror.

As we mount again the iron-rodded steps, we see that several of the men are confining their attention exclusively to keeping every part well oiled. It is very true—the old comparison of pleasant words that form the harmony of intercourse, with the lubrication that reduces to comparatively nothing the friction of concurrent metals. The ten or fifteen gallons of oil which every day smooth and accelerate our machinery, are as necessary to its working as the tons of coal, and the water over the fires; but how many forget, that, to make a perfect life, those words that cheer, those kindly actions that ameliorate, those genial tones that are themselves a benison, are as really essential as the austerity of the spirit, or even the increase of great gain!

The Vanderbilt was constructed under the immediate supervision of its now aged, but still vigorous owner, who, having begun life by rowing a little ferry from New-York to Staten Island, was able in the year 1856 to pay out the *million of dollars* which the ship cost that bears his name—it is said without borrowing or taking credit for a cent. The work upon her was all done by the day, from the very laying of the keel. As the Commodore never insures any of the large number of vessels he owns, preferring to run his own risks, he may well be supposed to have taken unusual pains in the construction of his largest venture. I was informed that knees or similar timbers which he rejected as not first-rate, were afterwards used in building the U. S. Steamer Niagara. If I could have seen the framework of the ship, I was told, there would be no longer occasion for wonder that a construction of such magnitude should perfectly stand the constant joltings of the waves; and from the description that followed of the interlacing of live oak timbers and the banding of iron plate, one would think every conceivable means of strength and firmness had been adopted. Three hundred and fifty feet is a considerable length to undergo the twistings of winds and waters. The breadth of the vessel is fifty feet; her depth of hold thirty-two feet, and she draws from 18 to 21½, according to her lading. Her custom-house tonnage, which excludes all the space occupied by machinery and coal, is 3,360 tons; that of the carpenters is 5,300. In reply to some queries as to the weight of her machinery, Capt. LEFEVRE thought that a safe estimate would be from 1,500 to 1,800 tons; her wheels weigh each 100 tons, and she carries 1,400 or 1,500 tons of coal. Then she has room for 1,200 tons of freight, and can accommodate in her state-rooms at the utmost 475 passengers. When the passengers are numerous the crew must be increased; it varies from 140 to 160, though I think on our voyage we had but between 120 and 130, of whom 54 were under the Chief Engineer, a large number under the head Steward, and the remainder the sailors who worked the ship.

Passengers not often Noticed.

There is one class of passengers to which I have not referred myself nor heard of reference by others, but who must be here numerous, and how widely varied! I mean those Hopes and Purposes, that, like attendant spirits, are hovering around the hearts of us all. I think I see that in some, they are rather birds of Carion, seeking really sensual indulgence in an old and strange land, instead of those objects which their possessors perhaps imagine they are following. In others they are desirous of Gain, constantly whispering to the soul, Get, get, get! In other cases yet, are there not pure or noble Aspirations, with which at present the stranger shall not intermeddle?

"Alike the busy and the gay
But flutter through life's little day,
In Fortune's varying colors dressed;
Bruised by the hand of rough mischance,
Or chilled by age, their airy dance,
They leave, in dust to rest.

What a procession from the spirit-land could we behold, if each of these waiting genii would clothe itself

in some visible shape when the vessel comes to her anchorage! What a panorama of hearts, if all these airy attendants could spread before us the tale of each breast over whose emotions they preside!

COURSE AND SPEED OF THE SHIP.

As I have never seen the course of a steamer in print, and the figures will take up very little additional space, I will subjoin them in a note.* They are all that a sailor requires to lay down his route on a chart, and perhaps some young reader has a map large enough on which he would like to try the experiment. It only requires to find the point which the degrees on the top and sides of a map show to be in the latitude and longitude mentioned at the end of each day's run, and, having marked these points with a pencil for all the ten days, to connect them by a series of straight lines from the first to the second, and so on.

DIFFERENCE IN TIME.

The difference of time between New-York and Southampton is just five hours, so that we have been getting ahead of our friends at home in that respect, a half hour every day. There is another fact in connection with the reckoning of a vessel at sea, which I never learned before; "the evening and the morning are literally taken to make the day—"Monday," for example, in nautical parlance being a term applied to that revolution of the earth, (perhaps I should write of the *ocean*,) which begins at 12 o'clock noon on Sunday. To all true sailors, therefore, it has now been Wednesday morning ever since to-day noon. This enables the officers to complete the log, &c., of each day, during the afternoon, closing up all their entries with the arrival of the sun upon the meridian.

MAGNITUDE OF PARIS.

From the second letter dated at Paris, May 10, we make the following extracts:

PARIS is a large place. No one who has seen it, will accuse me of exaggeration in saying so. To those who have not, how shall I hope to convey an idea of the meaning of the words?

I think that some superhuman power, such as the slaves of Aladdin's lamp, must be in league with his Imperial Majesty, Napoleon III. I can imagine that with such aid, the wonderful additions that have been made within ten years past to the ornaments; the wonderful improvements in the streets, the structures, and the promenades—this perfection, everywhere in Paris, might have been achieved; that new highways might have been laid out, and lined with palaces, in the midst of alleys, or cut through solid blocks of buildings; that a population in the city proper (1856) of 1,174,346, or, including its suburbs, of 1,727,419, should be kept in such perfect order and supplied with amusements so constant; above all, that the public purse should have become, apparently, so like the widow's cruise of oil, sustaining, unexhausted, every draft, and when, to the faithless eye, seemingly near a final depletion, eagerly replenished by every confident soul who has a few thou-

* The *distance run* is the number of miles made by the steamer during the 24 hours preceding the noon of each day, and *latitude* and *longitude* are each noon obtained by observation, showing precisely where the steamer stands at the moment the sun crosses the meridian:

		Long. W.
Dist. run.	Lat. North	frm Grweh.
1st day,.....	290	42° 1'
2d day,.....	312	42 45
3d day,.....	305	44 10
4th day,.....	295	45 34
5th day,.....	310	47 39
6th day,.....	304	48 56
7th day,.....	315	49 58
8th day,.....	331	50 1
9th day,.....	320	50 0
10th day,.....	330	10 0
At Cowes.		
Total,	3,112	

sand francs to loan on the credit of the Emperor and and the country.

Perhaps we have the means in the United States,—if we could have the services of the wizards who build cities and palaces in the Arabian Nights,—to put together a city approximating somewhat to the realities here. We would despatch one of them to Washington first, and borrow its wide avenues, its "magnificent distances," its public grounds; we should take also its public buildings, but when they are all brought near enough together to represent the compact ranges of architectural device that adorn Parisian streets, they would not take up a very extensive area. Then for the more ancient parts of the city, we should send to Boston, and borrow the crookedness of its older streets, and to New-York for whatever of sinuosity and narrowness could be found in any of its byways. New-York should also contribute all its long lines of "brown stone fronts," and all its marble or freestone palaces of trade. Philadelphia should give us some of its general uniformity, all its neatness, its finest buildings, its cemeteries. Chicago, St. Louis, Montreal, and half-a-dozen other cities, should be laid under contribution, and then a magic touch should transform the aggregate into one harmonious whole, in which, while tracing the growth of centuries, you might yet see the evidences of some grand renovating and all-disposing hand, now constantly engaged in enlarging, rectifying, embellishing; but also—from the fact that the same kind of building stone has been always in use here—the power as it were of some one presiding genius from the very beginning, guiding the destinies of the place to make it rank in the 19th century at the head of all modern cities in its elaborate decorations and splendid edifices.

ITS STREETS AND PAVEMENTS.

The Rue Rivoli, on which the hotel fronts, is nearly two miles in length. I have seen it all except a short distance at the eastern end, and for the whole length of all I have seen, (and perhaps the rest also,) there are gas lights on one side every 12 to 15 feet, making a most beautiful illumination in the evening. On the other side the lights are at intervals varying along the Tuilleries and its gardens, from 20 to 50 feet I suppose, but some of the streets are lit on both sides as numerously as this is on one.

The pavements here are more perfect, and the streets cleaner than I ever supposed possible. I have been called to several very widely separated localities, and in passing backwards and forwards, must have traversed a good many miles of streets, and this among the oldest, crookedest, and narrowest, as well among the new and wide ones. I have seen no place where the walking was not as good, so far as cleanliness was concerned, in the streets anywhere, as on the sidewalk. The streets are many of them frequently sprinkled, but I have seen no dust when they were not, and many of the sidewalks are also sprinkled two or three times in the day, I suppose partly to make them cooler to walk upon.

OMNIBUSES AND VOLTURES.

It is perhaps owing to the perfection of the pavements to which I have referred, that the horses here draw such loads. Two horses draw an omnibus, but constructed quite differently from those of New-York, for they accommodate *fourteen* inside passengers and *ten more on top*, beside the driver and conductor—a pretty good load. The city, too, is generally level, but I have been in one part of it where there was quite a hill to climb, and where a man stationed with a third horse, came and attached him in front of the other two to help them drag their load to the end of the ascent. When an omnibus is full, the conductor puts over the door a sign to that effect and won't stop for you, no matter how hard you beckon to him. There is one other good feature which appears to work most admirably. The fare in the inside is 6 cents, on top 3 cents, but all inside passengers have a right to what is called *correspond-*

ance; that is, if you have to take two omnibuses to reach the end of your route, on paying your fare in the first, you get a ticket that carries you without any further payment in the second. The omnibuses are all in the hands of one company, and there are offices in every part of the city where they stop to take up and let down passengers, and where those having *correspondance* from one line to another can change. They also run lines of smaller vehicles, called *voitures*, in the environs beyond the city walls—the *voiture*, holding ten persons and drawn by one horse. One has the right of *correspondance* in these also, but there is an additional charge of two cents for the distance outside the city. It appears quite singular to the American to see one horse only before a *hack* or public carriage, very nearly as large as those of New-York. The vehicle probably most frequently seen, however, has but one seat in the inside, where two persons may ride very comfortably. Otherwise in general form it is much like our carriages. These *cabriolets* and carriages charge a price of from 35 to 50 cts. per hour according to their size. The drivers are a very well appearing set of men, and I have found them always polite and attentive.

FRENCH AGRICULTURAL EXHIBITION.

From the Third Letter we select the following extract from an account of a visit to a French Cattle Show: After spending some days in Paris and its vicinity, of which more hereafter, I took an evening train for Nantes, which lies in a southwesterly direction, and at a distance of 265 miles—a journey by rail of a fraction less than 10 hours, (if one takes an express train,) and which I only made by night from the necessity of the ease and knowing that I could return in daylight. The object of the journey was mainly to be present at what we should call a Fair or Agricultural Show, of considerable interest. Under the name of a *Concours Régionale Agricole*, an exhibition was to be held, open to competition from a "region" of eight "Departments"—the five, of which under the ancient division of France the province of Brittany was composed, and in addition those of Vendée, Maine et Loire, and Sarthe—thus covering a considerable territory and a large agricultural population.

These "regional" exhibitions take place in considerable numbers at this season, probably covering altogether, although not in the same year, the whole of France. From what I have understood, there is an annually at Nantes a show of fat cattle, but only at considerable intervals a show of the kind I have seen, including stock, machinery, and agricultural products. The exhibition—as I presume everything else in France, from great public institutions down almost to the very conversation of the private citizen—is directly under the supervision of the government. The "Ministry of Agriculture, Commerce and Public Works," has it especially in charge. M. de SAINTE-MARIE, "inspector general of agriculture," is the *commissaire général*, or as I suppose, nearly our "general superintendent," or "chief marshal" of the exhibition, and is in fact, I suspect, the sole head, although the *Prefect* of the Department is the *Président d'honneur*. There are five other *commissaires* or superintendents, respectively for cattle, sheep, out-door agricultural machinery, in-door machinery, and products. There is a board of four judges for cattle; another of like number for sheep, swine and barn-yard stock, (poultry and rabbits,) of both of which the commissary general is the president; two boards of four each, respectively for out-door and in-door implements, and a third for farm products, the president of the latter three being appointed by the *Prefect*. Farm machinery and products were received and classified on the grounds Tuesday and Wednesday, and the machinery tried the second day, the judges completing their examination of them the third day, after which on Thursday, admission to this part of the *Concours* was open to the public at one franc (say 20 cents.) The animals were also received and arranged Thursday, and examined by the judges Friday, after

which admission to them was open also at one franc. Saturday the whole was opened to the public for an admission fee of ten cents of our money, and Sunday, which was the great day for the crowd, admission was gratuitous, and at noon a "session" of the *Concours* was held, at which the prizes were publicly declared and paid.

Thus much for the arrangements of the show, to which, however, I should add two items which were to me of vital importance, and must have been of great interest to everybody else. I wish most heartily we could have them at our shows. First, to every animal and every machine there was attached a medal with a number, and there was a printed catalogue which contained a complete list of all, numbered to correspond. This catalogue was sold for 5 cents a copy, and in itself was worth double the price of admission to one who really wished to know what there was to see. Second, there was offered for sale at the same price Saturday morning, a complete list of the prizes awarded. This, although a matter of no little convenience, was practically less important, because notices giving the class, catalogue number, prize awarded, &c., had also been affixed to everything which had received either a premium or an honorable mention. When the visitor has thus the means of knowing clearly what it is he is looking at, such an exhibition becomes doubly instructive, especially when he can also determine the comparative merits of all and each, with light afforded by the judgment of those selected to decide officially upon them.

In the catalogue of the show itself, *CATTLE* in their various "categories" begin the list. Of those indigenous to France, there were three classes. The *First* included the "Nantais, Parthenais and Choletais" breeds, different names I think of much the same stock, derived probably from the different localities where it has flourished. The prevailing color among them is a kind of dun, verging sometimes toward a yellowish white, and at others becoming a light brown—these different shades often blending in different parts of the same animal, and while catalogued as red, pale-red, yellow, yellow-red, brown, bay, sorrel, and under quite a further variety of terms, in many cases really manifesting between themselves a variation of hue almost imperceptible. An exception to this, however, is the gray color quite prevalent among the *Parthenais*, and occasionally showing itself in the others, while notwithstanding that which I have before described, with its slight modifications, gives the stock a general uniformity, and is often combined with a skin of a creamy yellow tinge that puts one in mind of rich milk and good butter. The horns are delicate, of medium length, and, with very rare exceptions, tipped for a few inches with black. The face is well shaped, and the eye as intelligent and fine nearly as that of the *Alderneys*. They are tolerably symmetrical in form, but I saw few or no evidences of that systematic breeding with a view to its improvement, which has brought the contour of the *Devons*, for example, to such a degree of perfection. In size I doubt whether the *Devons* or they would turn the scale. One would, in fine, judge them to be of a hardy, serviceable race, giving in proportion to their consumption probably a fair return of milk and labor, and some good beef.

In this class there were shown no less than 63 males and 48 females—a larger number than in any other, which, together with the fact that afterwards in a long drive out into the country from Nantes, I do not think I saw one apparently of any other sort in the fields or roads, leads me to presume them to be the most universally in use, if not the most generally esteemed in that part of France. The prizes offered were of generous amount, as follows: Four prizes for bulls from 1 to 2 years old—respectively,* \$120 and a gold medal; \$100 and a silver medal; \$80 and a bronze medal; \$60 and a bronze medal, and the same medal for two more animals, receiving a first and second "honorable mention." The same prizes were given to bulls over two

* This is counting 5 francs as equal to one dollar.

years old, these two being the only division of the males as regards age on the list. The females had three divisions—those between one and two, those from two to three, and those over three years old, and the prizes offered for them run from \$20 up to \$80, each accompanied as above with a medal.

The *Second Class* on the list was the *Breton* breed—one which in color, abounds mostly in black or black and white, although there was here and there a specimen of red and white among them. I remember one heifer especially, which I thought would have taken a prize, perhaps because in preferring her color I overlooked defects which the judges discovered, for I believe they did not even award her an honorable mention. The first prize yearling bull entered as "sorel," was also nearer what I should call red and white; he did not appear to me quite equal in quality to some of his competitors, for as regards the softness and nice handling of the skin I thought the Bretons generally pretty good. I am told since the show that they are considered, perhaps, better for milk than the Nantais, while the latter are most highly esteemed for work. Their yield of milk, however, was said not to be very large; 12 to 15 or 16 *litres* per day, perhaps 1,500 per year, being outside of the average. (The *litre* is a small fraction more than our quart.) The first prize cow, 5 years old, black and white, was small, with fine bone, a horn slender and quite long, but a neck like a bull's in coarseness and weight. The neck is one of the ugliest features in the Bretons and some other breeds classified below, while, if I remember, in the Nantais it is generally clean and handsome.

Of the Bretons, there were shown 22 males and 44 females; the prizes were from \$40 up to \$80 for the former, and from \$16 up to \$50 for the latter—a very considerable reduction, as will be noticed, upon those offered in the preceding class.

The *Third Class* comprised all French races, not before included, and I find the following on the list: "Manceau, Cotentin, Maraischin, Salers and Bordelais." Of the five breeds, however, there were only seven bulls and eight females on the ground. Two bulls of that first named took the highest prizes offered; the one 14 months old was of fair size, I should think, for his age; his back had a concave bend—a defect quite common in many of the other breeds; he was heavy under the neck and head, but had a skin of rich color and fair touch. The other, 3½ years old, had blinders over his eyes, as though he might be ugly in disposition; he was clean limbed, but stood lower in front than behind, giving him also a hollow look in the back, which might otherwise have been quite straight. He had considerable good meat, but a neck that for size would not have disgraced a buffalo. The prizes in this class were of the same amount as in the second, but only a part of them were awarded.

This rough outline of some of the French races of cattle will only convey an exceedingly imperfect idea of them to the reader. Without having received that homage which art has been paying to the domestic animals of Great Britain for more than fifty years, they cannot, of course, be judged by the same standard as breeds the improvement of which during such a period, has been the constant task of intelligent effort. But do not they offer at least a starting point for similar efforts? Indeed such experiments may now be progressing, of which I am ignorant; the high prizes awarded by the government should certainly stimulate them. The only question which the French farmer has to decide is, whether in the end it will be his better policy to have perfected the native races of his country until they equal those of any other, or on the other hand to have taken the mode, (which certainly seems the shorter,) of crossing the best foreign breeds upon them, and so availing himself at once of the improvements already made in other countries. If I might hazard an opinion, it would be this,—that while the latter may be a source of present gain, it is to the former he must turn for a more real and abiding advancement.

In the *SHEEP* there was little or nothing to notice specially. There were some good South-Downs pure, but the show consisted mostly of crosses of South-Downs with Cotswolds, and various other mixtures—with much less of the Merino blood than I expected—the class devoted to the latter (pure) having in it but one single ram, and for this fact I am relying on my catalogue, as I didn't discover him on the ground.

Nor shall we find among the *SWINE* anything very rare. The indigenous breed shown, was a heavy hog, affording, I should think, a good frame for improvement, but not as well filled out as the best English large breeds, which have sometimes attained a surprising bulk of flesh. The English hogs of pure blood on exhibition were "Middlesex" and "New Leicester," with one lonely Berkshire, and there was a third class, composed of cross-breeds.

The *POULTRY* show included 85 lots, in relation to which my catalogue lies before me with various memoranda of merit, demerit and description, which in the fullness of this letter I will spare to the reader whose courage has carried him thus far. Suffice it to say that admirers of the Asiatics could probably have selected something to suit them, while other varieties were not altogether thrown into the shade, and a few ducks, two pens of geese, one of turkeys, and quite a small assortment of rabbits made up the "tout ensemble" in this department of the *Concours*.

The Prizes offered for the animals were certainly very generous, amounting for Cattle to \$5,000 or a little more, and for Sheep and Swine to nearly \$1,200—besides the medals which accompanied all the money prizes, and the large number of bronze medals which were given as a token of honorable mention. About \$80 with numerous medals were divided among the exhibitors of Poultry, and about \$100, in sums of from \$5 to \$16 each, as I understood, to meritorious herdsmen or other farm laborers who had lived with their employers for various specified periods of time.

But far the largest of all was the *Prime d'Honneur*, awarded for the best conducted farm in the "region," on which improvements had been put in practice the most useful and important, and the most fitting to be held up for example to others. This magnificent prize was \$1,000 in money, and \$600 in plate. I do not know the conditions of the entry, but each competing establishment had been officially visited and examined before the award was made.

Of Agricultural Machinery there was a large show, and that of Implements was also extensive. The former consisted largely in Portable Steam Engines attached to thrashing machines, Stationary Engines of several patterns, Thrashers to go by horse power, generally with the *manège*, or lever apparatus, moved by the horse or horses, all connected in one frame, some few Harvesters, &c., &c. Among the Implements, were plows, horse-hoes, root-cutters, draining utensils, harrows, and so on—some of them much like our own, and some also which I have the vanity to think not so good. The large number of steam engines shows that considerable attention is now given in France to the employment of this power, although Nantes is a place in which machinery of all kinds is largely manufactured. The one which took the first prize was of six-horse power; the price was \$1,400, which is higher in proportion, I think, than that of most others shown; the cylinder, &c., were under the boilers, and there were two driving-wheels, on which the engine, when not in operation, could rest its weight, and by them, and the guidance of a team in turning the fore-wheels, furnish locomotive power for its own transportation from field to field. There were some implements shown of English construction.

M. de SAINTE-MARIE, to whom I had a letter from Paris, was good enough to give me the liberty of the grounds, and also provided me with a ticket for the distribution of prizes, which, as I have said, took place Sunday afternoon. After waiting its commencement a little while, the dignitaries of the occasion finally entered in procession, took their seats upon the stage, and

the band just outside opened with some preparatory strains. The uniforms and such exterior personal decorations, were, I think, a good deal more abundant among these official gentlemen, than the militia titles which we are laughed at for having in such profusion, would have been at a similar meeting at home, while the bearers of the latter would have presented themselves in civilian apparel. The platform had along its back and sides a staging of flowers, with hangings of "imperial purple," velvet bordered and adorned with gilt; the tri-colored drapery of the national flag was of course in sight; evergreen festoons hung along the roof, with here and there suspended a fine bouquet; the interior was filled with chairs, none of which lacked occupants, while the crowd also pressed round the outside to know what was going on. Monsieur the Prefect opened with a very nice little speech, of which I can say with one of the city dailies, that it was "happily conceived and warmly heard; tracing out the merits and the glories of that French agriculture, which creates at once both the wealth spread abroad throughout the country, and its race of working soldiers always ready to handle with resignation and with heroism, either the plow or the musket." The speaker also added some words in praise of the principal exhibitors, mentioning a few of them by name, and closed with a short reference to the hostilities in which France is engaged, and in eulogy of the Emperor. The report awarding the *Prime d'Honneur* already mentioned, was then read, which also included a recommendation of four medals to other proprietors. The prize list was next in order, each fortunate recipient coming forward as his name was called.

Rural Economy of Switzerland.

From his fourth letter, dated at Lausanne, Switzerland, May 30, we have only room for two or three paragraphs.

I observed evidences of careful husbandry, which I wish I could have had the opportunity of seeing better. Among them should be mentioned the irrigation of the meadows, carried on by means of trenches with just sufficient descent to allow of the gradual flow of the water, and to admit of its being spread from time to time, as desired, on different parts of the fields. The grass was thick, fine, and very green, and one can easily see how three crops a year may thus be obtained, as it is said they are, on bottom lands fertilized by the mountain torrents. Fertilizing materials are also saved both in city and country, with economy; children are constantly seen in the streets and roads, with baskets and little wagons, collecting everything that can add strength and value to the manure heap; and a little later, in going by *diligence* across the country, I saw laborers at work watering some meadows with a liquid preparation, the odor of which might have attested its beneficial use—carried in a cart-vat, and distributed by them with pails or pans. In all the meadows there is a profusion of flowers—some dandelions, butter cups, and other familiar visitors in our own fields, with others still more numerous, which I did not recognise. I was assured, however, by several with whom I exchanged a few words in the *diligence*, that they were indigenous, and regarded as useful plants, instead of being considered as weeds and intruders.

Market at Lucerne.

There are several open, arched-like cellars facing along the water, where the markets are held, through which we had an interesting walk—the part devoted to meats being as sweet and clean as possible, although the slaughtering was apparently done close by. Then we came where the stands were occupied with the productions of the kitchen garden, and now and then some simple flowers, both wild and cultivated. Peasants from farther away were stationed about with paniers of vegetables, and others with baskets and tubs of butter, waiting with the most perfect nonchalance the coming of a purchaser. There were also tables of cheese, and some cheeses were cut for sale in retail, and however

good these cheese may have been, I liked not their savour. There is a different odor unto different manufacturers of cheese, and different tastes among the purchasers thereof; I doubt not, therefore, that this cheese of Lucerne found its willing buyers, and some nose glad to smell, as well as mouth to eat.

And, outside, it was moreover a general market-day, and the boats from the lake shore brought in large sacks of potatoes and some other produce, and the patient cattle from the country back, contributed also, and I suppose that the buyers of Lucerne laid in their stock of a week's provisions, amidst the stir and activity of that Tuesday morning.

Yoking Domestic Animals.

About the working of these cattle let me say a few words in conclusion for the present, for I find that one letter will not go so far as I had hoped toward the narration of my Swiss experiences. I have seen yoked all kinds of combinations—two cows, two oxen, two bulls—a bull and cow, and each singly, like a horse—before plows, before carts, before wagons, with yokes pulling from the horns, yokes pulling from the back of the neck, and yokes with hames like collars. In that part of France I visited, the universal system appeared to be to draw from a yoke strapped to the horns, and this seemed far more natural and easy for the cattle than I had supposed, perhaps quite as much so as the ill-fitting, ever-chafing bows one frequently finds with us. Singly, however, the cow or ox was often in regular horse harness. Here, there is a kind of yoke resting on the back of the neck, which does all the pulling, there being merely an apology for a bow on which there is no strain, to hold the yoke in place. This often appeared to cut badly, and was if possible worse than our own way—of which I do not remember having seen as yet a single example.

Castrating Colts.

In answer to an inquiry, "as to the best time to castrate a horse—age, season of the year, manner of performing, and after treatment,"—I answer:

1st. Best time—in mild, dry weather.

2d. Age—two or three. I prefer three, when the horse can be put in a pasture away from the mares—two, if not.

3d. Season—spring.

4th. Manner—make a couple of clamps of elderwood, about an inch thick, and five long; strip off the bark, split in two, take out the pith, slope the end from the inside outwards one inch, cut a notch around each end to confine the string, in order to tie securely; take half an ounce of corrosive sublimate powdered fine, mix with tallow to a paste; fill the hollow of the clamps with this, then fasten the ends together with a string in such a way that the other end will be one inch apart; in that position tie them fast. Now throw the colt, and tie him, roll him on his back, grip his testicles firmly, cut the skin of the bag, and take out the stone; put the clamps on the cord, press tight, and tie fast the loose end of the clamps, then cut off the stone close to the clamps. Let them be on till the next day, then cut the strings and take them off.

5th. After treatment—we never have any. C. T. Doy. Lawrence, Kansas.

LONG-ISLAND LANDS.—I am residing on Long-Island, about two miles from North Islip station. These "barren lands"—so called—are fertile and productive, and where they have been cleared and manured, produce luxuriant crops. We have as fine strawberries as can be found anywhere; and one of my neighbors has a peach orchard of nine acres, which for excellent growth and good bearing, cannot be beat. People had better purchase these lands instead of going west, the climate is so much better, and produce can be taken to New-York market every day. J. A. LAWTON. Hauppauge, L. I.

Poor Man's Cow Stable.

EDITORS CO GENTLEMAN—You have opened the door so wide, and invited the "halt and the lame, and the blind," that it is very likely some unworthy scribblers may seek admittance to your pages. But while Messrs Editors sit as masters of the feast, we have a guaranty that no guests shall be received unless wearing, albeit in humble guise, the badge of the husbandman. At least I hope that this "favor" will be tested in the editorial crucible, and if "found wanting," pray do not allow it to encumber your valuable columns.

As the object of your paper is to aid and benefit the farmer, it may not be out of place to give, through its columns, a description of the stable, built since Christmas, which in its accommodations and manner of construction is adapted to the wants as well as to the *purse* of the poor man. It is probable there may be some among your readers who would be glad to increase the comfort of their animals, and add to the convenience of their buildings, but have not the *cash* to build with.

I have been for the last two years a subscriber to your excellent paper, and for a considerable time before of THE CULTIVATOR, and have obtained much instruction from their pages. A great embarrassment has always been the want of means to carry out the practice of their advice; but I am satisfied the class of farmers spoken of above, who most need their counsels, will not and ought not to read them in vain, without finding plans and methods of improvement in the various details of the farm, adapted to their circumstances and necessities.

My barn, somewhat akin to Squire Slipshod's, is "30 by 40," more or less, having a thrashing floor near the centre. The main doors which enter this floor are narrow enough to leave a space at one corner of the floor where a door may be cut through the siding of the barn. The cow stable is built in the form of a leanto on the side of the barn, so as to be entered and fodder thrown in from the barn floor by this door—the entrance for the cows being from under an open shed at one end of the barn; where also the cleanings of the stable are carried out on a wheelbarrow, and mixed with that from the horse stable. The fodder when thrown in from the barn floor falls into the feeding passage in front of the cattle, which stand in stanchions.

There is a gutter close behind them which receives all the droppings, preventing the cows from besmearing the udder and teats, much to the satisfaction of the milker, and the comfort of the animals. The passage behind them, including the manure trench, is about three feet in width. The trench is 15 inches. The stanchions, as well as all other parts of the frame are made of poles from the woods, and easily made smooth by peeling off the bark. It might be more easily and readily made of sawed lumber, but I am writing this for the benefit of those who must use that which costs little money. The roof is "shingled with straw," after the manner of thatching, and the rope-yarn used for this cost about 88 cents. This with nails was the only money expense in my case—not exceeding a dollar and a half in all, including a small glass window at each end of the feeding passage. Some temporary stables built a few years ago, and now pulled down, furnished lumber for the siding—about 400 feet, and plank for the floor. These newly purchased would cost \$10. Very few nails or spikes were used, except for nailing the siding—most of the posts being fastened with wooden pins. The doors slide behind cleats at top and bottom, and have no hinges. Altogether a rude affair, it is true; but quite as convenient and comfortable as many an *edifice* of greater pretensions.

There are seven stanchions in all, moved all at once by a straight pole, to which all the movable stanchions are attached at the top by a four inch carriage bolt through each—the seven bolts costing 17 cents, which

may be added to expense stated above. When the stanchions are pulled up to their place in fastening the cattle, a button drops into a notch in the top of the pole, holding it securely, and no careless hand can leave it unfastened. My boy eight years of age often turns the cattle in and fastens them.

The siding is put on clapboard fashion, and there is an arrangement for admitting air and light by having, at about three feet from the floor, a board fifteen or eighteen inches wide hung at its lower edge by leather strap hinges, which are put on in a way that cannot pull off. There is a row or tier of these all round; any one or all of which can be opened or closed at pleasure. This ventilation would be necessary in case the stables are used in soiling cattle in warm weather. We have found dry chaff to answer a good purpose, in the absence of a better material, as muck or sawdust, for filling the manure trench to absorb the liquid manure.

SLIPSHOD, JR. Niagara Co.

Experiment with the Currant.

MESSRS. EDITORS—It is conceded by all that the currant is a valuable fruit; nearly every family who cultivates a garden, have their "row of currant bushes." I find by practical demonstration that their growth, fruitfulness, early or late maturity, is much influenced by different modes of culture. I find that by constraining them within limited bounds, answers a good purpose. In the spring of 1852, I set cuttings of the currant close to my dwelling house, on the north end, and east side. These cuttings I have cultivated and trained to suit my fancy—they may now be termed *trees* instead of *bushes*. Some I have pruned off nearly all of the lateral branches. Of these the tallest now stand over *ten feet in height*. Before setting, rub off all the buds from the cutting, except one or two at the top. As they advance in growth, they require some support, and must be nailed to the walls of the house, with straps of leather to clasp over the main branch, and tack with small nails; this will keep them in an upright or any position you please, for you can train them in most any shape to suit the fancy—"just as the twig is bent, the tree is inclined." Trained over the window, we have quite an ornamental *window-blind*; and when the fruit matures, and the luscious, crimson berries hang in clusters, I think them more ornamental and more useful than the "Woodbine" or the "Eglantine."

By training my currants as above stated, I find they attain a much larger size, resembling cherries nearly, and the fruit more delicious. Those trained on the east and south walls, ripen *early*; and those on the north *late*. These retain the fruit on the trees fresh and good until the hard frosts of November. Another advantage is, the fruit is out of the reach of the fowls, which devour many on the low bushes.

I have in contemplation a suitable trellis, which may be constructed as an enclosure for the garden, on the north or south sides; say construct a close board fence, eight or ten feet high, or as high as you wish to train the currant. Select durable timber for posts, of suitable length; set 12 feet apart with girts, and nail on the boards in an upright position, on each side if you please, and well capped. Plant cuttings of the currant at suitable distances on each side of this fence, and you have a convenient trellis to train them to. Those on the south side will ripen *early*, and those on the north *late*. Such a trellis, well constructed of durable timber, and well painted, will last many years, and will combine the *ornamental* with the *useful*. L NORRIS. Windsor, Ohio.

LAWRENCE CO. FAIR.—The Eighth Annual Exhibition of the Lawrence (Penn.) County Agricultural and Horticultural Society will be held at New Castle, Pa., September 20-22, 1859. Among the premiums offered, we notice twenty copies of the COUNTRY GENTLEMAN.

Young Cherry Trees—Timely Hint.

Those who have set out young cherry trees the present season are generally pleased with their promising appearance and new foliage. Many of these planters will be sadly disappointed about midsummer to find that a large number which have appeared in leaf and grown two or three inches, will wither and die. This will be owing to the dry soil and parching air. Some will attempt to remedy the evil by watering; but this, generally, will only harden and bake the crust, and do more harm than good. As a general rule, more young cherry trees die that are watered, than otherwise. If the surface earth were removed, the water poured directly on the roots, and the soil replaced, the watering would be better. But the supply would be variable,—the roots wet now, and dry again next week. To prevent all these unfavorable influences and save all the trees, make the surface mellow, then apply a mulching consisting of at least six compact inches of old straw (or other litter) forming a circle six feet in diameter. This will preserve a uniform degree of moisture, and prevent the heating and baking of the soil and save the trees.

Herbert's Hints to Horse-Keepers.

This is one of the most attractive works ever written in relation to this subject, and on which its celebrated author possessed such a vast fund of information. Its mechanical execution exhibits the same perfection of art, which distinguishes all the recent publications of the enterprising firm of A. O. MOORE & Co. of New-York. Its numerous outline engravings exhibit a very near approach to perfection in accuracy.

It not only treats of horses, but of the various subjects with which they are connected. It furnishes ample instruction, not only on the selection and breeding of horses, but the reader is amply informed how to buy one without being imposed upon; and after the horse is bought he is told how to feed and take care of him; of the best kinds of food, and of the best kinds of stables; how to keep a horse in health, and how to cure him when he gets sick; grooming, feeding, driving, breaking, shoeing, riding, saddling, harnessing, reforming, &c., are all examined; but the author promptly refuses to give any information in relation to docking and nicking, for which he thinks there is no excuse. Ample directions, with illustrations, are given for ladies riding—as well as the Rarey and other modes of breaking and educating furious colts. The management of working horses is not overlooked, including the modes of attaching horses to the plow. A valuable and interesting chapter is furnished on the construction of carriages, and how to judge properly in buying one; and another on harness and its management. Some of these chapters, although not written by Herbert, add much to the value of the book.

The following brief facts we have taken variously at random, in looking through the work:

"A desire for ornament or a fine appearance, should never lead you to buy a fine carriage for a vehicle of all work. A 'shabby gentility' will be the result after the gloss is worn away."

"Ammonia from a stable will destroy the varnish of a carriage in a short time."

"At least once a month place a wrench on every nut on your carriage."

"Almost every wrong act a horse commits is from mismanagement, fear, or excitement; one harsh word

will so excite a nervous horse as to increase his pulse ten beats in a minute."

"Not only is it not true that speed alone is the only good thing derivable from blood, but something very nearly the reverse is true."

"Blood from the sire, beauty from the dam, is the golden rule of the breeder."

"We know it is commonly said by farmers, concerning some miserable, under-sized, ewe-necked, cat-hammed wretch of a mare, broken-winded, ringboned and spavined, 'Oh, she will do to raise a colt out of!' So she will! But what will the colt be? Not worth the mare's grass."

"It is never safe to take it for granted that the seller of a horse is an ass, or is not aware of the worth of his merchandise. To get a good horse, one must expect to pay a good price."

"A remarkable bargain in horse flesh is always suspicious, and the greater the bargain the more suspicious it becomes."

"More horses have their wind broken by being worked quick and hard, with their bellies distended with hay, grain, and water, than from all other causes combined."

"Always remember, in using a horse, that it cannot be done with too much coolness, too much gentleness, too much discretion, or too much kindness."

Egg Drops.

MESSRS. EDITORS—Here is a recipe which my wife sends you to make a very fine bread, especially for farmer's use.

Take one quart corn meal—pour a sufficient quantity of boiling water over it to make a thick batter—then add one tablespoonful of lard, salt to suit the taste, and three eggs. Then stir up well and drop a tablespoonful in separate places on a griddle or spider previously warmed and let them cook brown. You will find them excellent; just try them yourselves. V. B. B.

Drying off Heifers.

MESSRS. EDITORS—In the Co. Gent, of the 3d Feb., D. M. N. inquires, "would it be beneficial to dry off a heifer after her first calf has been disposed of?" From my own experience of thirty years I should say decidedly no! If a heifer is expected to make a good milker in after years—that is, to continue to yield milk for some months—let her, after her first calving, be supplied with nourishing and succulent food; milked with care, stripping her to the last drop, and her milking continued as long as she will yield anything, if but a gill, or up to a reasonable time of her calving, say six or eight weeks. I have invariably found the length of time a heifer is milked establishes the time for her to fail in after years, notwithstanding all the care that may be given her. A JAMAICA PLAIN FARMER.

Bees in Latitude 44° 34'.

MR. CHARLES BOOTH, an agent for our Journals at Lyn, C. W., writes: "If you please, at a future period I will give my management and success in bee-culture, which in substance is that recommended by 'Quinby,' simplified 50 per cent in the construction of the parent or main hive, and in some degree the upper box, by which construction and management my annual loss of bees is limited to one per cent. I get one good swarm from each old stock annually, (I want no more,) and yearly of beautiful white surplus honey, an aggregate amount equal to forty pounds per stock, old and young."

I am in 44 deg. 34 min. north latitude. I have often seen mercury at 38 degrees below zero, and here I do not believe bees would freeze to death in the open air with proper ventilation. Yet I keep mine in the cellar from 1st of December to 1st of March, and have better success than when I left them out all winter. I think a low uniform temperature and exclusion of light, producing a uniform torpid state of the bees, more conducive to success than in the open air, exposed to sudden changes from hard freezing to rapid thawing, and bright sunshine to chilling winds during the winter months."

Inquiries and Answers.

USE OF WASH AND HOUSE SLOP.—Can you inform me through your paper on the following point, viz: What can be done with the *greasy* sink wash, mingled with chamber-wash, &c., from a dwelling, to make it of value in a garden? My drainage now passes into a cistern set deep in the ground, but I wish to pump it out from time to time, and make use of it. Greasy water, I believe, affects most garden crops unfavorably. **SUBSCRIBER. Exeter, N. H.** [Add *ashes* to the greasy water, and it will become soluble and capable of being diffused through the soil. It would be better if this mixture were kept separate from the other liquid, or the greasy water added to a compost heap, of which ashes forms a small portion.]

JUNE GRASS.—Inclosed I send you a specimen of grass which is very common in this vicinity, but I can find no one that can tell me what the name is, or where the seed can be obtained. Will you please inform me through your valuable paper, where I can obtain the seed, and at what price? It is one of our best fattening grasses. **A SUBSCRIBER. New-Milford, Ct.** [Grasses, which, like the specimen sent, have but just headed out, and before the form of the spikelets is developed, are more difficult to recognize than afterwards. The specimen is also shrunken and withered. However, it is very evidently the *Poa pratensis*, the June or spear grass, and known at the west as the Kentucky Blue grass. It grows more luxuriantly there than at the east, which has induced some to believe it not identical with the June grass. The seed may probably be had at J. M. Thorburn's, 15 John-st., New-York. The price is variable—but usually about the same as timothy seed.]

SAWDUST MANURE—ANALYSIS.—There is near me a large quantity of partially decayed sawdust, bark, &c., (pine.) I have used some of it this spring for mulching fruit trees, and it appears to answer a good purpose. Could it not be turned to some beneficial account as a fertilizer also? It appears to me so. How, or by what management, would you, or some of your numerous intelligent readers, recommend as the best? What is the usual cost of a chemical analysis of a sample of soil or manure? **R. Franklin Depot, Va.** [As a general rule sawdust is not very valuable. When thoroughly decayed by a few years exposure in a heap to all weathers, it is nearly or about equal to common leaf mould. In this state it forms a good compost with common manure, or if dry, may be applied advantageously to cattle yards as an absorbent of the liquid manure. It is more valuable if reduced to charcoal, which may be effected by mixing it with shavings, brush, &c., covering with sods and leaving air-holes, and burning as for common charcoal. On heavy clay, sawdust well worked in, operates as a loosener. Soil analyses are advertised by some for \$5 to \$10. Prof. Nash says there are not probably twenty persons in the whole world who can analyse soils "reliably," and \$25 is probably the least sum for which an analysis could be procured from those competent chemists.]

SWINE IN ORCHARDS.—Does the permitting of hogs to run in an apple orchard injure the trees, even if they are wired? The orchard is about fifteen years old. I hear it said that the rubbing of a hog against an apple-tree is very injurious to the bark, and will in the end kill the tree, whether it be a big or a little one. In the days of our fathers, I don't think they would have killed it, but now a 'days there is no telling. **D.** [All animals rubbing against *small* trees, tend to sway them about, and to loosen them in the soil. A hole is thus made about them, and they become dried at the roots, and if the rubbing is continued, they usually perish. Hence small street-trees, if not well protected, nearly always die. We have never known hogs to injure large well established trees by rubbing against them, nor are we aware that any coating of oily matter thus applied to the bark has proved injurious. We have however

known large trees to be destroyed by hogs tearing off the bark with their teeth; and have always regarded it as safest to protect all the trees among which hogs run, by tying about the foot, branches of sweet briar or trimmings of the Osage Orange.]

A CONSTANT READER.—Our advice is that you invest your surplus funds in a few acres of land near your residence, where, without hindrance to your business, you can superintend its improvement and planting, and the erection of the buildings you require. For cost of buildings and fences we must refer you to some carpenter in your neighborhood.

BAROMETERS.—In answer to an inquiry made a few weeks ago, we can inform our readers that **HEMINWAY & GIBBARD** of Auburn, N. Y., make barometers, which so far as we have examined, appear to be excellent ones, at \$10 to \$20 each—the former answering well for the use of farmers.

DESTROYING SKUNK CABBAGES.—I have a meadow of some ten acres, which, with heavy manuring, yields a stout crop of English hay. The *Symplocarpus fetidus*, (Skunk cabbage,) abounds in it. Will it in time die out, if we eradicate the roots as thoroughly as possible every year? Will the plant spring up from little fibres of the main root which may be left? Is there any way to destroy it, except to dig up the roots with a spade and carry them off from the field, which is very expensive? **LEWIS G. LOWE. Bridgewater, Mass.** [We have no experience, neither in raising nor in exterminating the Skunk cabbage, and would call upon our correspondents for information. The small fibrous roots will not grow.]

SANFORD'S MILL.—Please give me your opinion of Sanford's Portable Farm Mill, for grinding feed, plaster and bones. I have a steam engine to grind bark for my tannery, and should like to grind four or five tons of bones, and likewise my feed for my farm stock, each year. **J. JILSON. Whitehall, N. Y.** [We have had no experience in the use of this mill. If any of our readers have tested it thoroughly, we shall be glad to hear from them.]

WATER TROUGH.—A correspondent asked, some time back, for the best water trough for a farm yard. Where lumber is not cheap, I believe a galvanized iron trough is in the end the most economical one. Six years ago I had a large trough for my farm yard built, of yellow pine, boards $3\frac{1}{2}$ inches thick. It was stayed with iron bolts and nuts, and well grooved and jointed together. From the constant dampness underneath the bottom plank, last year that part of it had rotted. Its cost was nearly as much as an iron one would have been. **D.**

CRACKED HOOF.—Allow me to inform J. S. R. that if he will take his horse to the blacksmith, and have a nail put through the hoof and clinched, so as to prevent it from working when the horse travels, he will find it to be better than to spoil his horse with the chisel, as recommended by A. F. or J. W. F. I think there is great danger in cutting, as the foot of the horse is a very complicated part of the animal. The clenching will be effectual, if well done. If one nail will not hold it firm, put in two—put one as near the hair as you can and have it hold and not crowd the quick. **W. H. C. Providence, R. I.**

IRISH SMUTS.—I should like to know if any one can tell anything of the origin of a breed of sheep known and raised in New-England for more than sixty years, and called "Irish Smuts." They have been bred more than that time in the valley of the Connecticut. They are large, very good shaped sheep, with brown or "smutty" faces and legs. Having had recent occasion in delivering a lecture on sheep husbandry, to examine critically into the history of sheep, I find no trace of their importation, nor any Irish breed from which they could have sprung. **J. S. GRENNELL.**

ROARING IN HORSES.—Can you or any of your correspondents inform me through the CULTIVATOR, of any

cure for the thumps in horses? W. R. *Nebraska City*. [The disease which our correspondent refers to, is doubtless a modification of that commonly termed roaring. We believe it is usually hard to cure, but a thorough knowledge of the cause must first be obtained. Dr. DADD remarks that if the difficulty be at all removable, there is no better way to accomplish it than by improving the general health of the horse, in the use of proper diet, expectorants, and relaxants, and by steaming the nasal passages. Perhaps some of our readers can furnish a remedy for this disease; if so, we will gladly insert it.]

LICE ON CATTLE.—Can you give me a remedy for the removal of blue lice from off my cattle? A SUBSCRIBER. *Albany, N. Y.* [It is seldom that lice trouble cattle at this season of the year, for if they can have access to the ground and lie down in the dirt, it will usually eradicate the lice. A safe and effectual remedy, which we have used with perfect success, is to give the animals a thorough washing with strong soap-suds. This, repeated two or three times, at intervals of a day or two, will do the business.]

COAL TAR FOR SHINGLES.—Can you or any of your correspondents tell me whether coal tar is a good article to put on the roof of a barn, to preserve the shingles, &c. HARRY. [Coal tar is an admirable preservative of wood, but a strong objection exists against its application to shingles, namely, the great heat which it occasions has the absorption of the sun's rays. Roofs, the exterior portions of buildings, and all implements exposed to the sun's rays, should be of some light color, that will not become heated, crack, and warp in the sun. Any wood structure or vessel, not exposed to the sun may be preserved by the use of coal tar, better and cheaper than by the use of any other application we know of.]

THE MOLE.—Will you or some of the readers of the Cultivator, answer the following questions—How can meadow moles be destroyed? What do they live upon? Can they be taken in a trap? What should the trap be baited with? Where should the trap be set? I have a piece of upland that has been in corn and vegetables three years; last fall I manured it with stable manure and plowed it in. This spring I plowed it again, and set out cherry stocks, and a small piece I sowed with onions, and the moles have been through the ground in every direction. I don't know as they have done any harm to the cherry stocks, but they have riddled my onion bed thoroughly. Any information upon this subject will be thankfully received by one who reads the Cultivator. JOSEPH E. PHELPS. *Worcester, Mass.* [The American Mole or the Shrew-Mole of Dr. Godman, is undoubtedly the animal referred to by our correspondent. Dr. Godman and other writers strenuously urge that the mole does more good than harm by the multitude of insects which it destroys—an opinion with which most cultivators will hardly coincide; at all events those who live in regions not infested with them, will probably rest satisfied without their introduction. The mole is destroyed by poisoning and by traps. The poison, (arsenic or strychnine,) is applied on fresh strips of beef, strewed in their holes, and it is said they will not be eaten unless soon found. Another mode is to apply it in grains of corn, by raising the skin of the soft part with a knife, scooping out a portion of the soft part and filling the cavity with arsenic. Another is to stick holes into a potato with a sharp stick, and put arsenic into these holes. Their tunnels are opened at the freshest part, and these are dropped in. The mole is also caught in traps, but we are unable to describe the best, as we have had no experience in this way. Will some correspondent who has had, please give us the benefit of his knowledge.]

WEN ON AN OX.—I would like to know if there is any cure for an ox whose jaw is much swollen. I have a three years old steer, the bone of whose jaw has enlarged very much the last six or eight weeks; it appears connected to the fork of the under jaw. JNO. M. E. VALK.

Meadow Bluff, Greenbrier Co., Va. [In a former number of the Co. Gent., Mr. J. W. CLARKE of Wisconsin, gives a receipt which effectually cured an ox in his possession having a wen on the under jaw. It was a salve of soot, spirits of camphor, turpentine, and soft soap, in no very exact proportions. Apply three times a day, the wen being rubbed thoroughly before as well as after applying the salve.]

GREEN FOOD FOR COWS.—I wish to make inquiry through the Co. Gent., as to the best crop to sow for green fodder, (to feed milch cows,) to sow the latter part of June. W. H. B. [We know of nothing better than Indian corn. If any of our readers know of a better crop for the purpose, we shall be glad to hear from them.]

MAGGOTS IN ONIONS.—Can you give me any remedy for the worm or maggot in onions. A. SMITH. *Ware, Mass.* [There are said to be two or three generations of the onion flies during the summer. The late Dr. HARRIS, in his work on *Insects*, recommended pulling up the onions as soon as they turned yellow, and putting them into the fire. This would doubtless be effectual in some degree, but a portion of the insects would of course remain in the ground through the winter. Measures should therefore be taken to destroy the maggot while in the pupa state in the soil. On small spots of ground, this may be effected by a free use of hot soap suds, or a good dressing of ashes, salt or lime, to be applied in autumn, so that the rains will dissolve the potash, and thereby perhaps destroy the tender pupa.]

QUINBY'S MYSTERIES OF BEE-KEEPING EXPLAINED.—Can you inform where I can obtain Mr. Quinby's work on Bees. A. SMITH. *Ware, Mass.* [We can send you the work, postpaid, for one dollar.]

PUMPING WATER UP-HILL.—Noticing the following inquiry from one of your subscribers, viz: Can I bring water 6 or 8 rods by a suction pump? I would say from actual experience, yes. The distance from the well to the pump makes no difference with the operation of the pump. It will raise water just as high the above distance, as though the pump was directly over the well. I have used a pump that stood some distance from the well, with a gradual rise of about twenty feet from the well to the pump, and yet the pump worked as easy as though it stood over the well and drawed water the same height. The above was an old fashioned wood pump. The logs were put down like a common water works, only the logs were rimmed out with an inch and a half auger. They must be air-tight. The above is a simple statement of facts, with more experience than theory. If your subscriber wishes any more information I should be happy to give him all in my power. AN OLD SUB.

GRAFTING THE PEACH ON THE WALNUT.—A gentleman of this place has suggested to me the idea of grafting the peach on the common black walnut. He says that they do succeed invariably in producing a heavy crop, on account of the lateness of the walnut in putting forth, and that they never winter-kill. I would be happy to hear from any person, through your valuable paper, their knowledge on the subject, and as to the best time and manner of grafting the same. P. MYERS. *Des Moines, Iowa.* [The peach will not grow upon the black walnut—there is no natural affinity between them; they belong to totally distinct natural orders.]

NUTTING'S FAN-MILL.—In the CULTIVATOR for May I see a more extended notice of "Nutting's Fanning and Assorting Machine," of which I had previously formed a very favorable impression, and now feel satisfied that it is just what I want. Where can I procure one and how—price, &c.? Will you please inform me in the July number of the Cultivator, and you will doubtless oblige many others, as well as myself. DANIEL T. BROWN. *Orange Co., N. Y.* [Will the manufacturers please notice, and advertise accordingly?]

PLASTER ON WET LAND.—In reply to a question as to the effects of this application, addressed to French farmers, Boussingault received ten answers—all expressing the opinion that it was of no benefit.

Notes for the Month.

GREAT TRIAL OF PLOWS.—There will be a thorough trial of plows, under the auspices of the Maine Agricultural Society, at Augusta, to commence on the 13th of September next. Competition is open to all the world, and medals will be awarded for the best plow for all-work; sod plow for stiff soils; sod plow for light soils; plow for fallows; reversible plow; combined sod and subsoil plow; subsoil plow; implement for deep and thorough pulverization of the soil, that shall successfully compete with the plow. Plows are required to carry a furrow not less than seven inches deep, and adaptability for all work, and for fallows, for stiff soils and light soils. Entries must be made with the Secretary, Dr. E. HOLMES, Augusta, Me., before the 1st of August next. The awarding committee consists of S. L. Goodale, Saco; John P. Perley, Bridgton; J. D. Lang, Vassalboro; Sanford Howard, Boston, Mass.; John J. Thomas, Union Springs, N. Y.; James J. Mapes, Newark, N. J.

PEOPLES' COLLEGE.—A quarterly meeting of the Trustees of this Institution was held at Havana, on the 11th ult. Among the business transacted was the adoption of resolutions, providing for the endowment of nineteen Professorships; among which are: Anatomy, Physiology and Veterinary; Natural History; Chemistry, Mineralogy and Botany; Agricultural Chemistry; Practical Agriculture; Horticulture; Natural Philosophy; On the Application of Sciences to the Arts. The course of study embraces three departments: Classical, Scientific, and Select; the course occupying four years, at which time the students receive a diploma. Students can take a partial course, if desired.

NATIONAL AGRICULTURAL AND STATISTICAL BUREAU.—A circular has been issued to the agriculturists throughout the Union, to make an organised and systematic effort to secure the establishment by Congress of a National Agricultural and Statistical Bureau. The author of this movement is VICTOR B. BELL, Esq., of Chicago, Ill. He says: "The proposed measure has repeatedly been brought before the notice of Congress. Its adoption was earnestly and specially recommended as of high national importance, by Presidents Washington, Taylor, and Fillmore. Resolutions of instructions in its favor have been passed at one time and another, by the legislatures of Vermont, New-York, Massachusetts, Pennsylvania, Tennessee and Alabama. The Hon. A. A. H. Stewart, while Secretary of the Interior, made an able report, urging its adoption as a measure of great public utility." Of the value to the country of such a Bureau, provided it could be conducted free from political influences, we have not a doubt, and hope it may be established.

FAILURE OF CORN ON MUCK.—A correspondent of the *Ohio Cultivator* has tried corn on the "black land" in Clinton Co., where it is well drained and cultivated, and fails to grow crops. He says the corn looks fine and does well until about waist high—then the blades begin to show a marked, striped appearance. After that the stalk does not grow well; the few ears formed are worthless, and the yield on the deepest muck is not over ten bushels per acre. Probably the muck wants aerating or exposure to the air to a greater depth than it has yet received. We have seen corn tried on a mucky soil growing excellent grass, roots, oats, and barley, which failed as did that above stated, and after a few years other grains ceased to do as well as at first. We thought it due to the exhaustion of the surface soil and the acidity of subsoil, still quite wet below twelve or fourteen inches in depth. Who has raised good corn on a deep black muck?

VALUE OF PASTURAGE.—"P. H." of Milan, O., to illustrate the value of grass to the farmer, gives in the *Rural New-Yorker*, the statement condensed below. A year ago he had a seven acre fresh clover pasture,

above what he thought necessary for the stock he then owned. For this he purchased, at \$8 each, some thrifty yearling cattle, partly Durham, which had been well wintered—turning them in as soon as they could get a full bite. Seven were placed in the lot referred to, for three and a half months, which gave them abundant feed, and more, which was consumed by horses. A competent judge then said they would sell quickly at \$13 each, giving \$5 per acre for the grass they had consumed—the price of stock having fallen rather than risen during the summer. Last winter he kept them on hay and cornstalks—sold one recently to a butcher for \$23; another is a cow worth \$25, and none are worth less than \$20. We incline to his opinion, that the profit would have been much less, had they been badly wintered the past season.

BLACK WALNUTS AND BUTTERNUTS.—An Illinois farmer has grown these trees successfully, and gives some hints on planting in a religious journal. The first requires a deep alluvial soil, where it grows very rapidly. The nuts may be planted in the fall when first gathered, or thrown in some safe corner and lightly covered with leaves and dirt until spring. They should be planted where they are to stand, for owing to their long tap-root they are troublesome to transplant, besides not doing as well after the tap-root is cut off. The butternut may be grown in the same way; it has no tap-root, but lacks rootlets, and therefore had better be planted where it is to remain.

THE ELDER BUSH A PROTECTION FROM INSECTS.—We have seen it stated that an eminent English botanist made experiments in the year 1794, which led to the conviction that elder bushes would prove a protection from many of the insects which are so troublesome in gardens. If any one will notice, it will be found that worms, flies, bugs, or insects, never touch the elder. This simple fact led to experiments, and it was found that leaves of the elder scattered over cabbages, cucumbers, squashes, and other plants, subject to the ravages of insects, effectually shields them. And it is said that the plum and other fruit may be saved from the ravages of insects, by placing upon the branches and through the tree, branches of elder leaves. It is very little trouble to try the experiment, and we hope some of our readers will test this remedy and report upon it.

LARGE YIELD OF RUTA-BAGAS—TRANSPLANTING.—Wm. J. PETTEE, of Salisbury, Conn., writes to the *Am. Agriculturist* that he has repeatedly tried sowing ruta-baga turnips in a bed thinly, about the 10th of June, and when the plants are of proper size transplanting them to the open field. The plan saves the first weeding, and also the thinning. Mr. PETTEE reports that he gathered 900 bushels from an acre so planted. The best quarter acre produced 325 bushels, or at the rate 1300 bushels to the full acre.

BONE-DUST.—A contemporary suggests that old bones should be placed in the heap of stable manure, and the heating, sweating process will soften them, so that they can easily be broken up, and all the animal matter and gases retained. By placing them in the fall where the manure heap is to be made, and keeping them covered by the accumulating heap during winter, they will add much to the value of the manure.

WATER TROUGHS.—A large iron kettle, such as is used for boiling potash, furnishes a convenient and lasting watering trough for stock, and we find them cheaper in the end than any which can be made of wood, however strongly constructed.

SURFACE MANURING.—A Maine farmer, writing to the *Boston Cultivator* on the application of manure, says that trials of plowing it under and of putting it on the surface after plowing, have satisfied him that the latter is the way to use it most profitably. He has tried it on corn, potatoes, wheat, oats, and grass, and always with good results. He first composts it with muck or loam, until it is made fine, and then spreads it upon the furrow—harrowing it in before planting or sowing. He

says plowing under manure produces good effects, but they are less satisfactory than surface application, especially of fine manure.

ARTICHOKEs.—A correspondent of the *Maine Farmer*, writes to that journal that Messrs. E. & D. P. RAMSDELL of Canaan, Maine, planted a piece of ground in the spring of 1858, measuring two squares, with artichokes, and this spring they dug from the ground twelve bushels. This is at the rate of 960 bushels per acre, and we cannot see why it may not be a profitable crop to raise for hogs, milch cows, &c.

SORREL HAY.—This grass, says the *N. E. Farmer*, should be cut before the seed is fully matured, and cured with as little exposure to the sun as possible. Mow in the morning, and cock in small bunches as soon as the dew is off. We thus obtain an article possessing considerable value, and which is eagerly devoured by sheep and horses, besides accomplishing much towards eradicating it from the soil.

SOAKING FENCE POSTS.—A number of years ago, we published in *THE CULTIVATOR* a receipt for soaking fence posts in a solution of blue vitriol, which is worth republishing at this time, particularly as our attention has been recently called to it. The receipt of Mr. GEORGE B. GREEN of Windsor, Vt., as formerly published was: "One pound of blue vitriol to forty pounds of water. If the timber is dry, soak it ten days; if green, six will be sufficient. This solution will do for all kinds of timber requiring exposure to the weather—spouts, shingles, bean-poles, stakes, &c." A member of the Farmer's Club in Hudson, recently informed us, that at a late meeting of that club the subject was brought up for conversation, and one of the members exhibited a post, which, previous to being placed in the ground, had been soaked in a solution of blue vitriol—one pound of vitriol being used to twenty quarts of water. The post was pine, and when taken up was as sound as when first put down, eight years since.

THE FLUKE OR PRINCE ALBERT POTATO.—The *Rural New-Yorker* pronounces these two varieties identical, and thinks the change of name was given for purposes of speculation. Perhaps this is so. The potatoes considerably resemble each other, but our experience in growing each sort has resulted so differently that we have thought them different kinds. The Fluke turned out very poorly for the two or three years under trial, while the Prince Alberts, grown last season, were a decided success. The vines of the first-named were dwarf and bush-like, those of the last of medium length, and the usual appearance. The product of the first was very small potatoes, though on equally good soil with the Alberts, which were mostly very large and handsome. We have seen Flukes of equally good appearance.

DEPTH OF UNDER-DRAINS.—On this subject, JOHN JOHNSTON, who has laid some 220,000 tile on his farm in Seneca Co., says in the *Boston Cultivator*, "If practicable, drains should go so deep that the water comes in at the sides, instead of rising from the bottom of the ditch, and this I have found the case at from two and a half to three feet deep on my farm, with very few exceptions. After going deep enough to protect the tile, (and two and a half feet is ample for that,) I can see no reason for going down eighteen inches into the hardpan or stiff clay, wherein there is no water; neither do I think any man can show a good reason for so doing. It is true, if I did not find a bottom impervious to water at two and a half feet, I would go deeper, and find it if at all possible."

MARKING SHEEP.—Dry Venetian Red is said to be the best paint which can be used for marking sheep. It combines with the oil of the wool, and cannot be easily removed.

HOW TO REMOVE FILMS FROM THE EYES OF CATTLE.—I have had good success by using blue vitriol, finely pulverised. To apply it, fill a goose quill, and hold the eye open and blow it in. W. Allegany, N. Y.

EXHIBITIONS AND FAIRS.—We have received circulars and premium lists of the societies who are to hold their fairs as follows:

Maine St. Ag. Society, to be held at Augusta, September 13—16, 1859.

Salem Horticultural Association, Salem, O., September 14—16, 1859.

Fairfield Co. Ag. Society, Norwalk, Ct., Sept. 27—30, '59.

Conn. River Valley Ag. Soc., Charlestown, N. H., Sept. 20—22, 1859.

OHIO STATE FAIR.—The Tenth Annual Fair of the Ohio State Board of Agriculture, will be held at Zanesville, O., Sept. 20—23, 1859; the premium list and regulations of which have been received from JOHN H. KILPART. Among other noticeable premiums, the Society offer \$40 for the best acre of Indian Corn, not to produce less than one hundred bushels.

ROCK ISLAND AGRICULTURAL SOCIETY.—A circular of the Premium List and Regulations of this Society has reached us, from D. F. KINNEY, Secretary. The 7th Annual Fair is to be held at Rock Island, Illinois, Wednesday, Thursday and Friday, Sept. 21—23, 1859.

LAPORTE CO. AG. SOCIETY.—A circular of this Society has been sent us by C. F. WEBSTER, Sen. The Eighth Annual Fair will be held at Laporte, Laporte Co., Ind., October 4—7, 1859.

SALE OF DEVONS.—GEO. VAIL, Esq., of Troy, has recently sold his imported Devonshire bull "May Boy," and two fine yearling Devonshire heifers, to I. V. JONES, Esq., of Burke Co., Georgia, and also a fine young Devonshire bull to C. N. BEMENT, Esq., of Poughkeepsie. The young animals are the get of "May Boy," and will do credit to any herd.

MR. THORNE'S CATALOGUE.—We have received the "Catalogue of Short-Horned stock belonging to SAMUEL THORNE, Thorndale, Washington Hollow, Dutchess Co., N. Y." It embraces fifty cows and heifers and fourteen bulls, which for purity and excellence of blood, are probably not excelled by any herd in Europe or America.

STOCK IMPORTATION.—The York County Agricultural Society of New Brunswick, have lately imported from the herds of the Messrs. Geekie of Perthshire, Scotland, four improved Short-Horn bulls and two heifers, and three improved Leicester rams. The animals arrived at Fredericton in excellent condition, and will do much to improve the breed of cattle and sheep in New Brunswick.

DRAINAGE IN FRANCE.—Within a year or two past, large tracts of land have been thoroughly and systematically drained in the vicinity of Paris. The total amount of land drained in the Department of *Seine et Oise*, is five thousand acres, owned by two hundred and twenty-four land-holders; costing an average of \$27 per acre. By this means the product of the land has been increased nine dollars per acre. The estimated yield of wheat has been from nineteen to twenty-six bushels to the acre, and of oats from twenty-eight to forty bushels. A foreign writer says that before many years, draining and irrigation may be carried to such an extent as to free France, in a great degree, from the numerous inundations to which many portions of the country are now subject.

ROOT CROPS IN ENGLAND.—The London *Farmers' Magazine*, states that 40 tons of swedes per acre, all cleaned and topped have been grown, each turnip being allowed a space of 28 by 10 inches, thus taking up 280 square inches of ground. If planted regularly, this would give 22,402 turnips, which at 4 lbs. each, would amount to 40 tons 8 lbs. per acre. It further states that a market gardener at Fulham, grew 64 tons of mangold wurtzels per acre, on a wager of twenty-five dollars, which the gardener won. They were planted each in a space measuring two feet by one foot; each root taking up 288 square inches. There would thus be 21,780 plants upon an acre; and each one must have averaged a little over 6 lbs. 9 oz. to produce the 64 tons. The land on which this enormous crop was grown, is yearly

dressed with the strongest horse manure that can be obtained - that principally made from corn. This shows what high cultivation will do for the root crop.

GREEN CROPS FOR FODDER.—A matter of considerable importance which we would urge upon our readers at this moment, is that some crop be planted as a feed for cows during the summer. If this has not been done already, no time should be lost in doing it now. If a half acre cannot be sown, let it be less; but have the ground in good order, and plant corn or Chinese sugar-cane, in drills at about three feet apart, so as to be easily cultivated, and the weeds kept down. It should be planted at intervals of about ten days till the first of September; thus a fresh supply will be on hand as feed for milch cows. A dozen stalks cut and given to each cow night and morning, will give a wonderful increase of milk and good appearance, and the cows will very willingly come to the stable at night. We have tried this method, and recommend it to all farmers. In the Northern States, the seed of the Southern corn, which can be procured at all grocers, will be found better for this purpose than the Northern varieties. If the butts of the stalks are too hard for the cows to eat, they can be given to the hogs; thus nothing is lost.

AGRICULTURAL "SCIENCE."—“If there be any *truth* in the *fact* that the composition of a plant is a clew to its requirements *as food* in the soil, they [“figures of some of the most important elements of the Indian corn plant,”] will prove interesting and useful.” Thus speaks the “Weekly Farmer” department of one of the Illustrated Journals of our Metropolis. The sentence is a model of murdered English and of nonsense. “Facts” are always “true,” but such “facts” as the statement that “an analysis of the grain of White Flint corn will give of

“Phosphates, about 35 per cent.
“Potash, “ 25 “

Will admit of considerable question. The statement that “the cob will give about 35 per cent,” is of the same character. If true, the supply of potash could be procured far more cheaply from the corn crop than any other source—over *twenty pounds* being contained in every bushel of corn in the ear, to say nothing of twelve pounds to the hundred in the leaves!

FFECTS OF FROST ON WHEAT.—A correspondent of the **COUNTRY GENTLEMAN** writes as follows: “Doleful accounts of injury to the wheat crops west, from the late frosts, have reached us. It may not be generally known that fair crops of wheat are sometimes harvested when a June frost has killed the whole stratum of upper heads. Such a case occurred in northern Ohio about 1845. A friend showed me a field of about 20 acres soon after the frost, which had just headed out, standing some four feet high, and which he supposed had been entirely destroyed. The reserve stalks afterwards came forward, and gave him a yield of about 20 bushels to the acre. But for the frost it should have yielded from thirty to thirty-five per acre. Let us hope our farmer friends who have been touched with the frost, will take courage, trust in God and good husbandry, and all will be well. J. W. S.

CULTURE OF POTATOES.—A writer in the *Prairie Farmer*, thinks potatoes are seriously injured by working when wet with dew or rain, and relates the following experiment tried last year. A part of his potato field, the whole of which was treated alike, and a good soil, he plowed and hoed once only, in the middle of the day when the ground was perfectly dry, leaving them untouched until dug in October. The vines kept green throughout the season, and the crop of potatoes was very large. The other portion of the field was worked three times when the ground was wet with dew. These blighted early, gave but half a crop, and that of inferior quality. The seed and time of planting were the same.

CHANGING SEED.—A writer in the *N. E. Farmer*, says the yield of his potato crop is increased from fifty to one hundred per cent, by procuring seed potatoes which grew on an entirely different soil, fifteen or twenty

miles apart. And this plan of changing seed is a good one, and should be remembered by all practical cultivators. Corn, pumpkins, beans, and garden seeds, do better by frequently changing the seed; and even if the change is only made in one's own vicinity, and among neighbors of a few miles distant, it will be a great benefit to the crop.

State Fairs for 1859.

We publish this week a list of the time and places where State Fairs are to be held, so far as we are able to give them. Will our readers, in States not reported, inform us, that our list may be complete.

Canada West,.....	Kingston,.....	September 27-30.
California,.....	(holds 10 days.)	September 27-
Georgia,.....	Atlanta,.....	October 24-28.
Illinois,.....	Freeport,.....	September 5-9.
Indiana,.....	New-Albany,.....	September 26-30.
Iowa,.....	Oskaloosa,.....	September 27-30.
Kentucky,.....	Lexington,.....	September 13-17.
Maine,.....	Augusta,.....	September 13-17.
Michigan,.....	Detroit,.....	October 4-7.
New-Jersey,.....	Elizabeth,.....	September 13-16.
New-York,.....	Albany,.....	October 4-7.
Ohio,.....	Zanesville,.....	September 20-23.
Vermont,.....	Burlington,.....	September 13-16.

Cheese Dairies and Dairy Cows.

ROME, N. Y., June 9, 1859.

EDITORS CO. GENT.—A kind friend, whose broad acres spread out around this beautiful village, invited me to a short ride, that we might see some of the finest lands in the county.

Our route lay along the banks of the Mohawk, which here tends to the north, and also along the banks of the Black River canal. A portion of the way the bottoms are narrow, but at other points they spread out much wider, furnishing some beautiful farms.

The business of the farmers in all this region, seems to be the dairy, and if they do not make money as rapidly as their grain growing brothers, they keep it better, as the general thrifty appearance of the country indicates. We passed one farm establishment that might be called a Cheese Factory, and furnishes a hint that may be useful in other places. The small dairies in this vicinity bring their milk to this farm, where it is all manufactured into cheese at a certain rate per pound, and when sold the proceeds are divided pro rata, according to the milk brought. As the most profitable cheese in this section, should weigh from 80 to 100 pounds, it enables the small dairymen to dispose of their milk to the best advantage. That it works well is shown by the fact that the business has been carried on now for some five years.

Our drive terminated at the residence of Mr. HENRY WAGER, who has long been identified with agricultural progress, and one of the active members of the State Society. He is a practical farmer, working some five or six hundred acres of land. As the region is not favorable to grain, his operations are mainly confined to stock and the dairy. Some idea may be formed of his operations, by knowing that his herd of milch cows numbers about one hundred and twenty, divided into two dairies. I regretted that I did not have time to visit the dairy houses and see the whole process of cheese making, from the milking to the press.

Some of the finest cows for milk that I have ever seen, were in his herd, and the systematic manner in which he prosecutes his breeding, must ultimately give him one of the finest herds of cows in the state. He has taken pains to get Short-Horns of good milking qualities, and is breeding grades in that direction. Thus far his success has equalled his most sanguine expectations, some of his heifers of the first cross being very superior dairy animals. I think he is in a very fair way of developing and perpetuating a superior race of dairy animals, and that persons who wish to improve their dairy stock would do well to get him to save some of his bull calves from the best of his grade milkers. He uses thorough-bred bulls in his herd.

To the farmers who think they have no time to arrange and beautify their premises, Mr. Wager's home is a study, for as yet I have not seen, in all the state, a simple farming establishment, more beautiful and complete in all its surroundings. Those farmers whose means will enable them to adorn and beautify their homesteads, could have no better model. P.

Hints on Turnips.

The ground upon which you have had a crop of early potatoes, or some other vegetables, may be used for another purpose after the crop has been taken off, thus obtaining a double profit from your ground. Those who live near a market, or in the vicinity of large cities, doubtless manage their land in this way, but farmers are not apt to thus economize their ground. Indeed we have seen farmers who would neglect to plant a piece of ground with purple-top turnips, which had been cleared of its former crop by the middle of August. And speaking of turnips, reminds us to say a word in regard to the English or common flat turnip. If you have a piece of ground from which has been taken a crop of early potatoes, it can be planted with English flat turnips, and the yield will be good, as they require to be sown about the middle of July or first of August, and grow rapidly during the cool weather—and they will gain until late in the fall. Where pastures are not too remote from farm-buildings, it is a good plan to plow a piece of ground and fence it off for a yard, where the cattle can be yarded until the first of August; then harrow and sow the seeds of the English turnip broadcast. Sward land is the best for this crop, as we have proved by repeated trials. In fact, the English turnip is an important crop, and this single item makes it so: it can be sown late, and put in those waste and spare places in the fields and garden where other crops are missing. There may be many hills of corn in your field which the crows or worms have taken, or which has not come; these can be noticed as you are hoeing the last time, and then several turnip seeds can be scattered in the place. These will produce a good yield, and it will be far better than to have the ground occupied by worthless weeds; or if you choose, ruta bagas can be transplanted in these waste spots. Transplanting should be done during or immediately after a rain. Have a small stick made smooth and sharp; with this you can make a hole in the ground, and the plant can be placed in the cavity in its natural position; the dirt should then be jammed around it closely, and it will hardly know that it has been moved from its original place.

TWENTY ACRES OF STRAWBERRIES.—The farm of Mr. R. SELLS, about five miles from Cleveland, O., is devoted entirely to growing the smaller fruits and berries. There are twenty acres in strawberries, of all the various kinds, and their comparative merits are distinctly shown under the methods of cultivation adopted. Of the new sorts, Wilson's Albany promises best.



EXCELSIOR AGRICULTURAL WORKS,
TIVOLI HOLLOW, ALBANY, N. Y.,
RICHARD H. PEASE, Proprietor.

I would call the attention of your readers to the following articles of my manufacture, being satisfied that they are, each and all of them, the very best and cheapest la-

bor-saving machines ever offered to the public. I use none but the best material, and employ as experienced workmen as can be had; hence my work is unsurpassed, both in utility and durability. All I ask is, that you should make a trial of any of my machines, and I am confident of giving satisfaction. The Excelsior

CHANGEABLE RAILWAY HORSE POWERS.

Have long been acknowledged to be the best, most durable, and easiest working machines in use. They have invariably taken the First Premium at every test trial where they have been exhibited, both at the United States and State and County Fairs. Price \$116.

CADY'S IMPROVED LEVER HORSE POWER,

To be driven by 2 or 4 horses, is a first-rate machine for heavy work, as it combines durability and cheapness, and has a variety of motions with same speed of horses. Price \$60.

Excelsior Changeable Thresher and Separator.

For threshing and separating any kind of grain, has stood many severe tests with uniform success, and can be run by wind, steam, or horse power. With my One-Horse Power, it is capable of threshing from 100 to 175 bushels of wheat, rye, barley, or buckwheat, or from 175 to 200 bushels of oats, in one day; and with the Two-Horse Power and one extra hand, nearly double the work can be performed. Price, Single, \$37; Double \$40.

THRESHER AND CLEANER COMBINED,

To be run by the Two-Horse Power, are warranted to clean the grain thoroughly. They are quite compact, occupying but little more room than the Thresher, and are highly recommended by those using them. Price \$125.

Excelsior Circular and Cross-Cut Saw Combined, (Cady's Patent,) can be attached to any horse, water, or steam power, with a belt, and is capable of performing more work than any machine of the kind in use. Over 100 of these machines were sold in one State last year, and all worked to a charm. Price \$65.

EXCELSIOR CIRCULAR SAW MILL,

For sawing cord-wood, stove-wood, &c., has been in extensive use on the railroads in the country, and also by many farmers, and is just the thing for the purpose. With a One-Horse Power, it can saw from 20 to 25 cords of wood in one day, and with a Two-Horse Power and an extra man, much more. Price \$37.

Slitting Table and Saw, for fence stuff, fitted to above machine at the trifling expense of \$7. Is very convenient for farm use.

EXCELSIOR CROSS-CUT SAW MILL,

To be run by the Excelsior Horse Power. Is capable of sawing a log 4 feet in diameter. Its cheapness and facility of using, recommend it to general use. Price \$25.

EXCELSIOR CLOVER HULLER.

This little machine is capable of hulling from 5 to 10 bushels of seed in a day, without injuring or wasting it in the least. Price \$32.

EXCELSIOR CIDER AND WINE MILL,

(Krauser's Patent,) is highly recommended as a great improvement over other portable mills. It grates the apples into a fine pomace, which falls into the tub, which is then shoved under the Press, where it can be subjected to a pressure of nearly 10 tons, thus obtaining every particle of juice. Price \$45.

EXCELSIOR DOG POWER,

For churning, turning grindstone, &c., is got up in a most substantial manner, all the shafting and rollers being of iron. Is easily attached to any churn, and is a great saver of time. Price \$18.

Shares' Patent Coulter Harrow and Grain Coverer.

This machine is a great improvement on the Scotch or drag harrow, and it saves once plowing. It lifts, loosens, and pulverizes the soil, and makes the ground as smooth as could be made by raking. Price \$15.

Shares' Patent Hilling, Hoeing & Covering Machines,

For covering, cultivating, and hoeing potatoes and corn. They do away entirely with the hoe, and by tilling and cultivating all parts equally, they insure a much larger crop.

Orders respectfully solicited and promptly attended to, for any of the above-mentioned machines, which are all warranted to give satisfaction, or they can be returned at my expense.

All descriptions of Agricultural Machinery built to order, in the best manner, at short notice.

Catalogues sent free, by addressing
RICH'D H. PEASE,
July 1—w&m1t Excelsior Ag. Works, Albany, N. Y.

FIRST QUALITY PERUVIAN GUANO. Mapes' Phosphate, Poudrette, Bone Dust, Castor Pomace, &c., for sale at Agricultural Depot, 100 Murray-st., New-York. **HENRY F. DIBBLEE.**

WORCESTER FLOWS and Castings of the "Eagle" and other celebrated patterns, for sale at Agricultural Depot, 100 Murray-st., New-York. July 1—m1t **HENRY F. DIBBLEE.**

RAMSAY'S FLEXION HARROW, composed of 3 square sections, which can be used separately or connected together. It has a wrought-iron frame, and will last life-time. For sale at Agricultural Depot, 100 Murray-st., New-York. **HENRY F. DIBBLEE.**

HORSE HOES of the Knox's and Expanding patterns, both of which combine hoeing and weeding, and are exceedingly useful and economical. For sale at Agricultural Depot, 100 Murray-st., New-York. July 1—m1t **HENRY F. DIBBLEE.**

FISH GUANO from the Southold Works, in quantities to suit purchasers, put up in barrels, at \$37.50 per ton of 2000 lbs. **A. LONGETT,** May 26—w4tm3t 34 Cliff-st., New-York.

BUCK-EYE MOWER! **A. F. MAYHER & CO.,** No. 54 Vesey-Street, New-York, Now offer to the Farmers,

THE BUCK-EYE MOWING MACHINE, Which is too well known to need any description from us. The Machine is WARRANTED to work well, or no sale. Farmers wanting

Mowing, or Mowing and Reaping Machines, Harvesting Tools, Agricultural Implements, Seeds or Fertilizers,

Will find it to their advantage to call at the **New Agricultural Warehouse, Machinery Depot and Seed Store, No. 54 Vesey-st., New-York,** Between Broadway and Greenwich-sts., near the Washington Market and Astor House, north side of the city of New-York. **A. F. MAYHER & CO., Proprietors,** No. 54 Vesey-st., New-York. **Send for Circular. Remember No. 54 Vesey-st.** May 26—w4tm3t



"The Best in the World."

OUR EXCELSIOR HORSE POWERS, THRESHERS, and THRESHERS & CLEANERS Combined, CIDER AND SAW MILLS, &c., are acknowledged second to no others, and have been awarded the highest testimonials where they have been exhibited. We have manufactured them for the last 6 years, and they are warranted to perform satisfactorily in every respect.

PRICES FOR 1859-60.

Two-Horse Power and Thresher, complete,.....	\$160.00
One-Horse Power and Thresher, complete,.....	128.00
Two Horse Power and Thresher, Cleazer comb'd,.....	245.00
Cider Mill, (Krauser's Patent),.....	40.00
Saw Mill,.....	37.00
Bands alone,.....	5.00

For further information, address

PEASE & EGGLESTON,

Manufacturers and Dealers in all kinds of Implements and Machines. June 2—w8tm3t

COMMERCIAL AGENTS WANTED Able and honest men from New-England or New York. **A. W. HARRISON, Philadelphia, Pa.** feb.10-6.

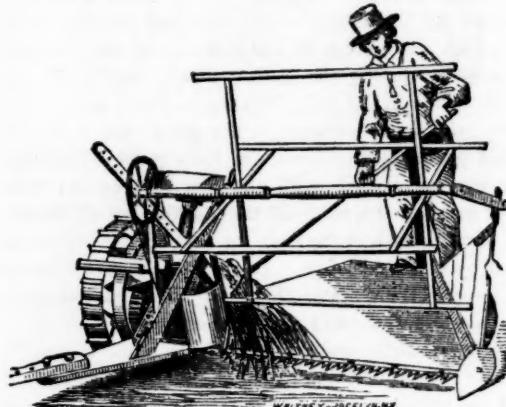
VIRGINIA FARM LANDS.

There are desirable FARMS for sale, at \$10 to \$20 per acre, within a few hours ride from Washington City. Wood is plenty, and pure soft water is abundant. Climate healthy and society good. For particulars, address **L. H. REYNOLDS,** June 16—w3tm2 Maple Valley, Prince William Co., Va.

FOR SALE CHEAP.—DURHAM BULL LOCO FOCO, (1778)—calved March 1853—color red with some white. He is in prime condition, and every way a desirable animal. Price \$150—cash. **R. HALE,**

Ap14—w3tm3t Aurora, Cayuga Co., N. Y.

MANNY'S COMBINED REAPER AND MOWER. WITH WOODS IMPROVEMENT. For the Harvest of 1859.



The subscriber begs to inform the public that he continues to manufacture this popular machine, and pledges himself to produce an implement that will fully sustain its former reputation, as the best combined machine yet introduced, and inferior to none, either as a Reaper or Mower.

It has had a steady and increasing popularity from the first achieving a complete success in the first important trial at Geneva in 1852. It carried off the highest honors at the great National Field Trial at Syracuse in 1857; and amidst all the competition and trials of 1858, came out with more and better established points of excellence than ever before.

The general principles peculiar to this machine, and upon which it is constructed, have proved so successful that there has been no attempt to change them.

The main effort during the last year has been to improve its mechanical construction, to make it stronger and more durable, and sustain its reputation as the leading and most acceptable machine to the largest class of farmers in the country.

Warranted capable of cutting from 10 to 15 acres of grass or grain per day, in a workmanlike manner.

Price of Machine as heretofore, varies according to width of cut, and its adaptation in size and strength to different sections of the country, from \$125 to \$150, delivered here on the cars. **WALTER A. WOOD,** Manufacturer & Proprietor, Mar24—w&mtf Hoosick Falls, N. Y.

OPPOSITION FARE REDUCED. MERCHANTS' LINE OF STEAMBOATS, BETWEEN NEW-YORK AND ALBANY.

The Steamer **KNICKER BOCKER**, Capt. W. B. Nelson, leaves the foot of Robinson-st., New-York, every Monday, Wednesday, and Friday, at 6 o'clock, P. M.; the Steamer **HERO**, Capt. J. W. Hancox, every Tuesday, Thursday, and Sunday. Returning, will leave the Steamboat Landing, Albany, daily, Saturdays excepted, at 7 o'clock P. M.

Travelers will find it to their interest in calling at the Office of the Agents of this company, before engaging passage elsewhere.

Freight carried at reduced rates and forwarded promptly. **ELI HUNT, Agent—Office on the Wharf, New-York.** **G. W. STEVENS, 282 Broadway, Albany** March 10, 1859—w&m9ms

HAY AND GRAIN PROTECTORS.

The subscribers have for four years, by extensive correspondence, by practical observation, and by many experiments, endeavored to obtain information that would be a guide to the manufacture of the best *Hay and Grain Covers*, and we now offer the results of these investigations to the public. *We know* that our Protectors are the best ever offered to the community. As to the utility of the covers, we have the testimony of intelligent farmers in every part of our country.

Orders for samples or covers should be forwarded at once.
CHASES & FAY,
May 5—*weow2tw8tm3t* 233 State street, Boston, Mass.

**BUCKEYE MOWER, WITH FOLDING BAR.**

Aultman & Miller's Patent.

The subscriber takes pleasure in calling the attention of Farmers to the "BUCKEYE," the most complete and successful Mower ever introduced; combining in the simplest form all the qualities necessary to a perfect Mower. Its frame is supported on *two driving wheels*, either of which is independent of the other. The CUTTER BAR is attached to the frame by a DOUBLE HINGE JOINT, which allows either end, or the whole, to rise or fall, to conform to inequalities of the land. By means of a lever, the Cutters can be raised to pass obstructions or over cut grass—in mowing can turn either to right or left—always throws itself out of gear in backing, and backs with the ease of a cart; is light draft, free from side draft; has no weight on the horse's neck; is safe for the driver; almost noiseless in its operation; works well on any land—side-hills or salt meadows; and in any grass, whether lodged or standing, at a slow walk of either horses or oxen.

When not in use, the Cutters can be instantly folded over the front of the frame, and the Mower then driven any distance on the road. This feature belongs exclusively to the Buckeye Mower.

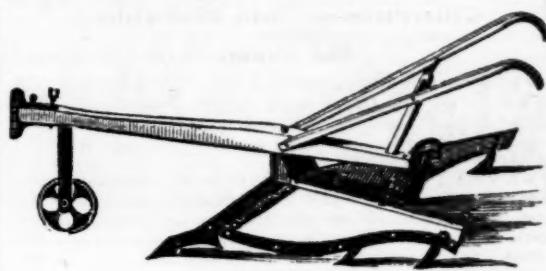
Since its first public exhibition, at the Great National Trial of Harvesting Machines at Syracuse, N. Y., July, 1857, at which it received the HIGHEST AWARD, THE FIRST PREMIUM GRAND GOLD MEDAL AND DIPLOMA, AS THE BEST MOWER, IN COMPETITION WITH *Manny's, Ketchum's, Halenbeck's, Allen's, Burrall's, Kirby's, Heath's*, and several others, its principles have been fully tested by more than One Thousand Farmers, and without an exception, has received their unanimous approval. During the past season, numerous *First Premiums* were awarded to the "BUCKEYE," including the *New-York and Connecticut State Agricultural Societies*.

THE BUCKEYE HAS NO EQUAL—IT IS THE BEST MOWING MACHINE IN USE.

It is warranted to cut and spread from 10 to 15 acres of grass per day, with a span of horses and a driver, as well as is done by the best mowers with a scythe.

The demand the past season was far beyond our ability to supply, and we trust orders will be forwarded early, to prevent disappointment. *Circulars, with a full description, forwarded on application.*

JOHN P. ADRIANCE,
Manufacturer and Proprietor,
No. 165 Greenwich-st., New-York.
EMERY BROS., Agents, Nos. 62 & 64 State-st., Albany,
N. Y. *May 1—w&mtf*

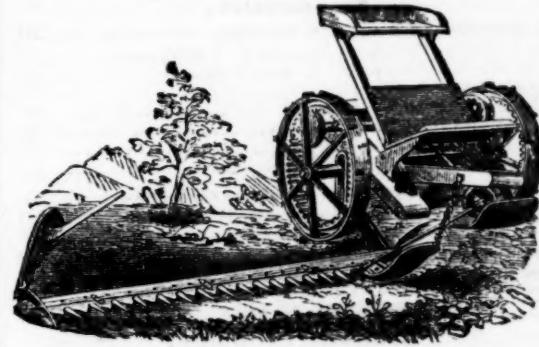


Farmers, Save your Money!

TRY ONE OF SHARPE'S PATENT CULTIVATING, HOEING AND HILLING MACHINES,

PRICE \$10, which will save more than twice its cost the first season, and with ordinary care will last years. It is light and easily used with one horse, and will do more cultivating in going between the rows once, than an ordinary cultivator can do in two or even three times, and will hoe and hill any crops planted in hills (the crooked form of the back part of the wings shape the hills,) or drills fast as a horse can walk, and better than men can do it with hand hoes. Price only \$10, and warranted—weight 80 pounds.

Manufactured by **PEASE & EGGLESTON,**
84 State-st., Albany, N. Y.,
Dealers in all kinds of Agricultural Implements, Seeds, &c.
May 12—*w&mtf2t*

WOOD'S MOWER.—
Patented February 22d, 1859.

During the six years I have been engaged in the manufacture of the *Manny Combined Reaper and Mower*, I have given much thought and attention to the construction of what I foresaw would be a great want of the Farmers—a lighter and cheaper machine expressly for mowing, than had yet been made.

And now, after the most thorough and repeated experiments and tests in every variety of field, and in all kinds and in every condition of grass, I am prepared with entire confidence to offer to the farmers and dealers of the United States, the great *desideratum* in this department of Agricultural labor-saving machines—a Mower, superior in its capacity for good work to any hitherto introduced, of easy draft, light, cheap, and durable.

This machine I now offer as my latest invention, to meet a special want of farmers, and to place within the reach of all, a Mower that for practical working, cheapness and simplicity, will be without a rival.

I build Two-Horse and One-Horse Mowers. The Two-Horse Mower weighs 425 lbs., and cuts a swath four feet wide (or more if specially ordered.) The One-Horse Mower weighs 30 lbs. less, (395 lbs.), and cuts a swath three and a-half feet wide.

For a more full description of the Mower, reference is made to my Pamphlets, which will be furnished on application. With each machine will be furnished two extra guards, two extra sections, one wrench and oil-can.

Warranted capable of cutting ten acres of grass per day in a workmanlike manner.

Price of Two-Horse Mower, \$80
" One-Horse Mower, 70

Delivered here on the cars.

I continue as heretofore, and with greater success than at any previous time, the manufacture and sale of "Manny's Patent Combined Reaper and Mower with Wood's Improvement." **WALTER A. WOOD,**
Manufacturer & Proprietor.

Mar 24—w&mtf Hoosick Falls, N. Y.
PEASE & EGGLESTON 84 State-St., Albany, Agents
for Albany County and vicinity.

Contents of this Number.

The Farm.

Composition and Management of Barn-Yard Manure,	201
Indian Corn—Top-Dressing of Ashes, Plaster, &c.,	202
Cotton Seed Oil and Oil Cake,	203
Depth of Plowing,	204
Culture of Buckwheat,	204
Southern Wheat at the North, by JOHN JOHNSTON,	204
Cheap Sulfur for Manure, by V. W. SMITH,	204
Road Making and Repairing,	205
Corn—Culture and Hoeing,	205
Advantages of Under-Draining, by R.	207
French's Treatise on Farm Drainage,	208
Tillage of Heavy Clays—Subsoiling,	209
Culture of Tobacco,	209
Crook's Clod Crusher, by W. C. S.,	210
Privy Arrangements, by M.,	210
Hay and Hay-Making,	212
Red-Top and June Grass,	213
How to Prevent Wheat Turning to Chess, by JOHN JOHNSTON,	214
Muck as a Manure, by B.,	214
Editorial Correspondence,	217
The Ship and its Accompaniments—Passengers not often Noticed,	217
Magnitude of Paris—Its Streets and Pavements,	218
Visit to a French Agricultural Exhibition,	219
Rural Economy of Switzerland,	221
Long-Island Lands, by J. A. LAWTON,	221
Inquiries and Answers,	224
Notes for the Month,	226
State Fairs for 1859,	228
Hints on Turnips,	229

The Grazier.

Mr. Alexander's Annual Stock Sale,	211
Hog Cholera, Poil Evil, &c., by F. POUND,	213
Long-Woolled Sheep, by A. KILGORE,	215
The Cattle of France,	219
Yoking Cattle in Switzerland,	221
Castrating Colts, by C. T. DOY,	221
Poor Man's Cow Stable,	222
Herbert's Hints to Horse-Keepers,	223

Horticultural Department.

Specific for Bugs on Vines, by V. B. B.,	207
Gas Tar as a Preventive to Insects,	207
Early Melons and Squashes,	210
Rose Slug, Remedy for, by S. O.,	213
Experiment with the Currant, by L. NORRIS,	222
Young Cherry Trees—Timely Hint,	223

Domestic Economy.

Out-Door Whitewash,	207
Remedy for Black Ants, by M. A. K.,	209
Cheap Paint for Buildings, by ISAAC DILLON,	211
Bite of Mosquitoes, &c., by C.,	213
Egg Drops, by V. B. B.,	223

Dairy Husbandry.

The Ingalls Cow,	213
Product of Ten Cows for One Year,	213
Salt for Butter,	215
Drying-off Heifers, by A JAMAICA PLAIN FARMER,	223
Cheese Dairies and Dairy Cows, by P.,	228

Rural Architecture.

Hints on Building in the Country, by G. E. HARNEY,	206
An Octagon House, by H. T. VOSE,	214
American Style of Villas and Cottages, by L. B. VALK,	216

The Apairy.

To Prevent Bee-Moths, by AMOS FISH,	210
Bees in California,	213

The Poultry-Yard.

Soft-Shelled Eggs, by R. W.,	207
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Illustrations.

Design for Cottage, 206 Crook's Clod Crusher, 210
Octagon House, 214 American Cottage, 216

Farmers should keep their accounts carefully, and know whether each year's operations will make them richer or poorer!

FARM BOOK-KEEPING.—By W. D. COCHRAN of Detroit. Sets—comprising *Full Instruction* in this excellent system, a careful reading of which will enable an unpractised hand to understand it fully,—also *Day Book* and *Ledger*—for sale at this office—price by mail, post-paid, \$2.30. L. TUCKER & SON

Horticultural Books.

Of all kinds, for sale at the Office of the Co. Gentleman.

BUCK-EYE MOWER

FOR SALE BY
A. LONGETT,
June 23—w2tm1t 34 Cliff-street, New-York.

MAPES' ONE HORSE STEEL SUBSOIL PLOWS for deep cultivation among growing crops—also three larger sizes of same pattern, for regular field subsoiling, far more thoroughly than the old styles. For sale at Agricultural Depot, 100 Murray-st. New-York.
July 1—mlt HENRY F. DIBBLEE.

WESTINGHOUSE HORSE POWERS,
THRESHING MACHINES,

EXCELSIOR FANNING MILLS,
For sale by A. LONGETT,
June 23—w4tm3t 34 Cliff-st., New-York.

PEEKSKILL PLOWS in good variety, for sale at Agricultural Depot, 100 Murray-st. New-York.
July 1—mlt HENRY F. DIBBLEE.

GUANO!—The superiority of Phosphatic over Ammoniacal Fertilizers in restoring fertility to worn out lands, is now well understood. The subscribers call the attention of Farmers to the *Swan Island Guano*, which, for richness in phosphates and organic matter, and its *solvability*, is unsurpassed.

For sale at \$30 per ton of 2000 lbs. A liberal discount will be made by the cargo.

Circulars, with directions for use, may be had on application at our office. **FOSTER & STEPHENSON**,
65 Beaver-st., New-York.

Agents for the "Atlantic and Pacific Guano Co."
June 26—w26tm6t

BYRAM'S POTATO DIGGER, a long established, thorough and durable implement—will pay for itself in digging four acres—for sale at Agricultural Depot, 100 Murray-st., New-York. HENRY F. DIBBLEE.

NEW AND VALUABLE BOOKS—
FOR SALE AT THIS OFFICE.

FARM DRAINAGE. The Principles, Processes and Effects of Draining Land, with stones, wood, plows, and open ditches, and especially with tiles; including tables of rain-fall, evaporation, filtration, excavation, capacity of pipes; cost and number to the acre of tiles, &c., &c. By HENRY F. French. Price \$1.00.

HINTS TO HORSE KEEPER: A Complete Manual for Horsemen; embracing how to breed, buy, break, use, feed, physic, groom, drive and ride a Horse, together with a chapter on Mules and Ponies. By the late Henry William Herbert (Frank Forester.) Beautifully illustrated. Price \$1.25.

A PRACTICAL TREATISE ON THE HIVE AND THE HONEY-BEE. By L. L. LANGSTROTH, with an introduction by Rev. Robert Baird, D. D. Third edition, revised and illustrated with seventy-seven engravings. Price \$1.25. The above will be sent, postpaid, on the reception of the prices named. L. TUCKER & SON.

Just Published—Price \$1.25.

A Practical Treatise on Grasses and Forage Plants,
COMPRISING

THEIR Natural History, Comparative Nutritive Value & Methods of Cultivation, Cutting and Curing, and the Management of Grass Lands. By CHARLES L. FLINT, Sec'y of the Mass. Board of Agriculture. For sale at this office, or sent by mail, for \$1.25.

Just Published, one vol. 12 mo.—\$1.25.

MILCH COWS AND DAIRY FARMING;
Comprising the Breeds Breeding, and Management, in Health and Disease, of Dairy and other Stock; the selection of Milch Cows, with a full explanation of Guenon's Method, the Culture of Forage Plants, and the production of Milk, Butter and Cheese: embodying the most recent improvements, and adapted to Farming in the United States and British Provinces. With Treatises upon the Dairy Husbandry of Holland; to which is added Horfall's System of Dairy Management. By CHARLES L. FLINT, Secretary of the Massachusetts Board of Agriculture; Author of "A Treatise on Grasses and Forage Plants," &c. Liberally Illustrated.

The above valuable work—the best, we have no hesitation in saying, yet issued upon the subject—is for sale at the office of this paper.

L. TUCKER & SON.

Albany, Dec. 2—w&mtf.